AB 118: Air Quality Improvement Program (AQIP)

FY 2013-14 Funding Plan
Staff Discussion Document

Public Workshop

April 14, 2013
Sacramento, CA

California Environmental Protection Agency
Air Resources Board

Table of Contents

Chapter 1: Background 3

Chapter 2: Overview of Proposed Project Categories 5

- **Section 1: Clean Vehicle Rebate Project** 6
- **Section 2: Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project** 12
- **Section 3: Advanced Technology Demonstration Projects** 16
- **Section 4: Truck Loan Assistance Program** 18

Chapter 3: Fiscal Year 2012-13 Project Solicitations 21

Chapter 1: Background

Purpose of the Discussion Document: This document identifies the core projects staff proposes to fund in the Fiscal Year 2013-14 AQIP Funding Plan, and outlines a number of concepts for discussion and consideration. Comments received on these concepts help to shape the proposed Funding Plan, which will be released for public comment on May 28, 2013, and presented to the Air Resources Board (ARB or Board) for consideration at its June 27, 2013 meeting.

Overview: AQIP is a voluntary incentive program created under the California Alternative and Renewable Fuel, Vehicle Technology, Clean Air, and Carbon Reduction Act of 2007 (Assembly Bill 118; Núñez, Chapter 720, Statutes of 2007). AQIP provides funding through 2015 for clean vehicle and equipment projects that reduce criteria pollutant and air toxics emissions with concurrent climate change benefits. AQIP investments to date support the deployment of hybrid and zero-emission trucks, advanced clean cars, and other advanced technologies critical to meeting California's long-term air quality and climate change goals. For more background on AQIP, please refer to Assembly Bill AB 118 Air Quality Improvement Funding Plan for Fiscal Year 2012-13 available at:
http://www.arb.ca.gov/msprog/aqip/fundplan/AQIP_FY2012_Funding_Plan-Approved.pdf

Funding Plan: The funding plan is each year's blueprint for expending AQIP funds. The plan establishes: (1) ARB priorities for the funding cycle; (2) funding allocations by project category; (3) modifications to program implementation based on public input and evaluation of previous years' projects; and (4) contingencies to address funding needs below or above expectations.

Prior Board Actions: The Board has previously approved Funding Plans for Fiscal Year's 2009-10, 2010-11, 2011-12 and 2012-13 which set the guiding principles and implementation priorities for the AQIP. These plans, in which the Board approved several project categories that were envisioned as multi-year projects, form the basis for this year's Funding Plan. Two projects, the Clean Vehicle Rebate Project and the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project, have received large financial commitments in the early years of AQIP. Staff intended for these projects to be funded over multiple years with funding levels adjusted based on need. The Board has also committed funds annually through AQIP to advanced technology demonstration projects. These demonstration projects are critical to accelerating the next generation of cleaner advanced technologies. Finally, in March 2013, the Board directed up to $4 million of Fiscal Year 2012-13 AQIP funds to support the Truck Loan Assistance Program. Additional funding is needed in the program to carry it through Fiscal Year 2013-14.

Guiding Principles for AQIP: Staff believes the guiding principles originally established by the Board in 2009 continue to be appropriate for AQIP and used them to identify funding priorities and projects for this funding year. Staff also recognizes that minor updates to these principles may be necessary to address the proposed inclusion of funding loan assistance mechanisms.

Currently, the guiding principles include:

- Supporting development and deployment of advanced technologies needed to meet California's longer-term, post 2020 State Implementation Plan goals.
- Focusing program funds on technologies underserved through other incentive programs.

Subsets of guiding principles were developed specific to deployment and demonstration projects. Deployment project guiding principles include:

- Accelerating advanced technologies to ensure significant penetration by the 2024 extreme ozone nonattainment area attainment date.
- Funding new, commercialized technologies that are proven and cost-effective.
- Modifying consumer choice to buy cleaner vehicles that may not have occurred without a monetary incentive.

Demonstration project guiding principles include projects that:

- Show the potential to provide cost-effective emission reductions.
- Can be economically viable without subsidy.
- Will be ready for commercialization within 3 years following demonstration.
- Apply to the California marketplace.

Chapter 2: Overview of Proposed Project Categories

For Fiscal Year 2013-14, the Governor's Proposed State Budget allocates $35 million for AQIP. However, actual revenue levels may be lower than the amount allocated, as demonstrated in recent years. This year, staff proposes establishing minimum funding allocations that ensure flexibility for funding projects as need arises, while committing minimum levels of funding for stakeholder planning purposes. Staff is seeking input on minimum funding allocations for each of the following proposed project categories:

- Clean Vehicle Rebate Project
- Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project
- Advanced Technology Demonstration Project

Additionally, a shortfall in funding for the Truck Loan Assistance Program has occurred. Staff is seeking input on the inclusion of the Truck Loan Assistance Program within the Fiscal Year 2013-14 AQIP Funding Plan, and a recommended minimum funding allocation.

Section 1: Clean Vehicle Rebate Project

Staff Contact: Meri Miles, mmiles@arb.ca.gov, (916) 322-6370

Overview: The Clean Vehicle Rebate Project provides vehicle rebates on a first-come, first-served basis to California residents, businesses, non-profit organizations and government entities that purchase or lease a battery or fuel cell electric, or a plug-in hybrid electric vehicle. This program helps get the cleanest vehicles on the road in California by providing consumer rebates to partially offset the higher initial cost of these advanced technologies. The early investment in clean vehicle technologies will prime the market for the larger number of vehicles needed over the next decade and beyond to meet the State's air quality standards and climate change goals, and Governor Brown's Executive Order B-16-2012, which establishes zero-emission vehicle benchmarks by 2020. ARB's investments through the Clean Vehicle Rebate Project — coupled with corresponding investments in vehicle charging and fueling infrastructure by regional governments, the California Energy Commission (Energy Commission) and federal government — is enticing manufacturers to focus early advanced vehicle deployments in California.

The project has adapted over the last four funding cycles to incorporate lessons learned through project implementation and in response to the evolving clean vehicle market. Adaptations include:

- Reducing rebate amounts in Fiscal Year 2011-12 in order to extend vehicle funding, while still providing meaningful incentives
- Capping the number of rebates per rebate recipient
- Reducing ownership to a one-year minimum for rental and car share fleets
- Establishing waiting list contingencies to bridge short-term funding gaps

Current rebates range from up to $2,500 for full functioning zero-emission vehicles, up to $1,500 for plug-in hybrid vehicles, to $900 for zero-emission motorcycles and neighborhood electric vehicles.

Status Update: The Clean Vehicle Rebate Project launched in March 2010 and since then, nearly 20,000 clean vehicle rebates have been issued, totaling $42 million in funding. In the first four AQIP funding cycles, ARB allocated a total of $48.1 million for the project. An additional $6.5 million was provided by California Energy Commission AB 118 funding. Total funding for Fiscal Year 2012-13 was $28.5 million, including $18 million originally allocated in the Funding Plan, $6 million transferred from the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project, and $4.5 million from the California Energy Commission. The project has approximately $7.5 million in rebate funds remaining as of March 11, 2013. When available rebate funding is depleted to $3

million remaining, ARB may authorize the establishment of a waiting list to bridge the gap between this year's and next year's funding.

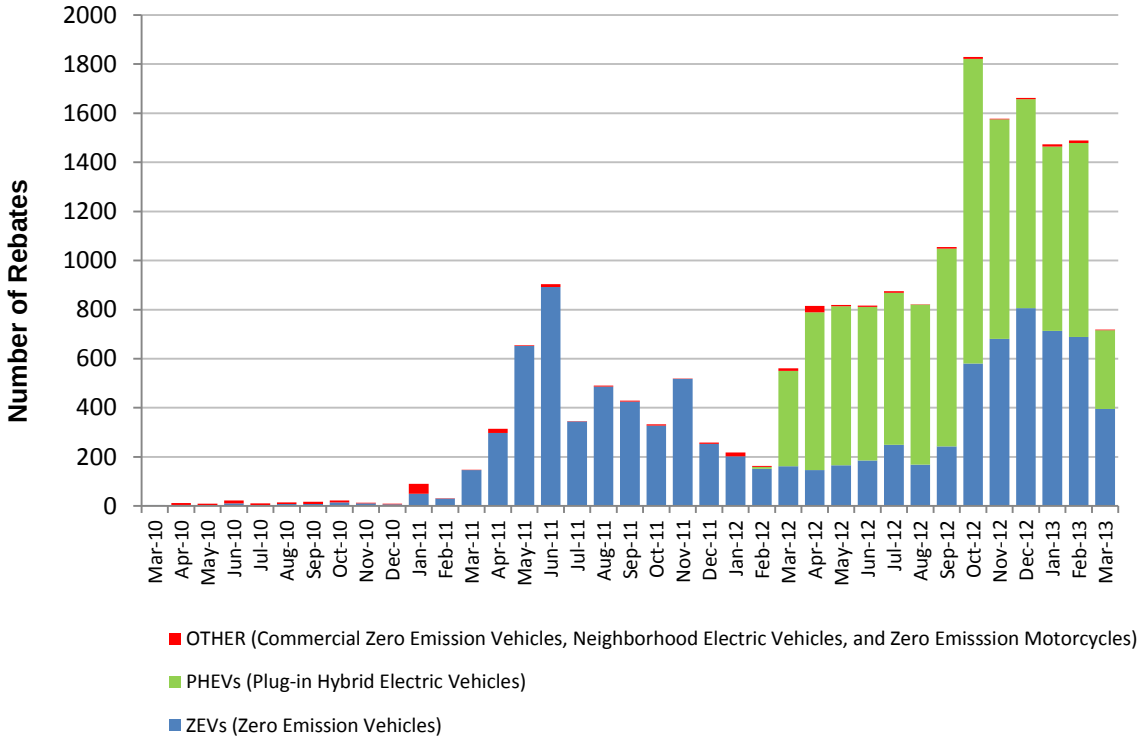
Consumers, automakers and dealerships attribute the program's success largely to its simplicity and fast payment (as compared to the $7,500 federal tax credit). The vast majority (over ninety percent) of rebate recipients are individual consumers. Of the rebates issues, about 51 percent have gone toward zero-emission vehicles and about 47 percent toward plug-in hybrid electric vehicles (with the rest going towards zero emission motorcycles, neighborhood electric vehicles, and commercial zero-emission vehicles from the first year of the program.), but the percent of funds expended is 66 percent and 31 percent, respectively, due to the higher rebate amount for zero-emission vehicles. Currently, 21 manufacturers have rebate-eligible vehicles, some with multiple models. The list of rebate-eligible vehicles continues to expand, and currently includes 29 different makes and models covering a range of price points. For a complete list of eligible vehicles, rebate amounts and information about the Clean Vehicle Rebate Project, visit www.energycenter.org/CVRP.

The non-profit California Center for Sustainable Energy, selected via competitive solicitation, continues to administer the Clean Vehicle Rebate Project statewide. Their responsibilities include project website development and maintenance, rebate processing and check issuance, consumer outreach and education, data reporting, and other duties associated with day-to-day implementation.

Rebates by Month

Figure 1 illustrates the trends in rebate activity under the Clean Vehicle Rebate Project to date. The project launched in March 2010, and rebate activity initially spiked with the release of the Nissan LEAF in early 2011. Another rebate spike occurred in March 2012 after the commercial release of plug-in hybrid electric vehicles. Demand increased throughout 2012, and continues to grow reaching nearly 2,000 rebates issued each month. Data provided in Figure 1 for March 2013 represents only a partial month of data.

Figure A: Clean Vehicle Rebates Issued by Month



Funding Needs: The anticipated funding need for the Clean Vehicle Rebate Project in Fiscal Year 2013-14 is at least $35 million. This projection is based on a continuation of the last six months of rebate disbursement volumes, as well as potentially higher funding needs driven by increases in consumer demand associated with new model releases, higher vehicle production volumes, and an increase in new car sales. Table 1 presents data on the number of rebates issued by month since September 2012 for zero-emission vehicles and plug-in hybrid electric vehicles. Zero-emission motorcycles and neighborhood electric vehicles combined comprise only about one percent of the rebate total and are not included in the table.

Table 1: Rebates Issued by Month

Month		Vehicles Rebated		Funds Expended
		Zero-Emission Vehicles	Plug-In Hybrid Electric Vehicles	
2012	September	243	805	$2,472,000
	October	581	1,243	$3,317,000
	November	681	894	$3,043,500
	December	806	851	$3,291,500
2013	January	730	776	$2,989,000
	February	652	759	$2,768,500
Average Monthly Expenditure				**$2,980,250**

AQIP funding alone will not be sufficient to fully meet the anticipated consumer demand under the project's current structure. Without any changes to the current project, a base funding amount ranging between $10 and $15 million, consistent with past funding years, could be expected to last between four and nine months. The anticipated allocation of $5 million to the Clean Vehicle Rebate Project from the Energy Commission in its proposed Fiscal Year 2013-14 Investment Plan is expected to extend the project between two and three months, but the gap between demand and available funds is still substantial.

Concepts for discussion: The concepts described below have been provided by many stakeholders to address limitations in funding, attract under-represented groups, or focus emission reductions in non-attainment air basins.

Modify Consumer Eligibility

Eligibility based on income level has been suggested as an approach to extend project funding. Limiting eligibility to specific income levels ensures that funding is available to populations that have, to date, been under represented in the Clean Vehicle Rebate Project, and that are more in need of subsidy. The demographics of rebate applicants is expected to naturally diversify over time as production volumes increase and vehicle prices go down (similar to the maturation seen in the hybrid electric vehicle market). Clean vehicle choices in the mid-class vehicle market also continue to expand. With increasing product choices and more competitive pricing, price-sensitive consumers and the next-tier of technology adopters should see increased opportunities to purchase clean vehicles. However, in the near term, vehicle and infrastructure costs may continue to be barriers to purchase.

Narrowing consumer eligibility to specific geographic areas, such as residents of the San Joaquin Valley or South Coast, could target rebates to portions of the state with the worst air quality. The combination of monetary and non-monetary vehicle incentives, combined with consumer infrastructure incentives and public charging investments continues to be important for clean vehicle penetration in these areas.

Review Vehicle Eligibility

Vehicle eligibility could likewise be narrowed for the purposes of extending rebate funding or meeting socioeconomic targets. Some stakeholders have suggested that a Manufacturer's Suggested Retail Price (MSRP) cap be placed on eligible vehicles, while others suggest funding only zero-emission vehicles because they are the cleanest technology available. An MSRP cap excluding upper price-tier vehicles would have the unwanted consequence of excluding from eligibility vehicles with the highest battery capacity and range. It also may not extend the funding significantly (less than 3 months), since high-MSRP vehicles have comprised only about 16 percent of the total rebates issued to date.

Limiting eligibility to just zero-emission vehicles may extend project funding from 3 to 6 months, but with significant drawbacks. Plug-in hybrid electric vehicles became rebate-eligible in February 2012 and several new releases are planned in the coming year. Drawbacks of removing plug-in hybrids from eligibility include that these vehicle type extend vehicle range and may be more likely to fully replace gasoline vehicles, (zero-emission vehicles are typically a second household vehicle) and that rebate demand in the San Joaquin Valley for plug-in hybrid electric vehicles has been more than double the demand for zero-emission vehicles. Conversely, neighborhood electric vehicles and zero-emission motorcycles may not generate the same level of emission benefits as highway capable vehicles due to lower usage, which could be a rationale for excluding them from future eligibility. However, rebates for neighborhood electric vehicles and zero-emission motorcycles combined comprise only about one percent of the overall rebate total, so removing these vehicle types would not appreciably extend the project funding.

Maintain Rebate Amounts for Full-Functioning ZEVs Only

Rebate amounts could be reduced for plug-in hybrid electric vehicles, neighborhood electric vehicles, or zero-emission although amounts would still need to be high enough to impact consumer choice. Consumers and automakers have provided feedback that rebate amounts are already at the minimum threshold necessary to still influence consumer purchase decisions, and that rebates should not be reduced. However, this topic has still been raised as an option for extending the program under limited-funding terms.

Standardize the Rebate Amount for Zero-Emission Vehicles

Standardizing the rebate amount to $2,500 for all light-duty zero-emission vehicles with a minimum 50-mile range or greater has been suggested. This would simplify the project for consumers and eliminate the sales advantage a higher rebate amount gives to zero-emission vehicles rated Type II and above (vehicles with a range of 100 miles or more).

Enhance Public Fleet Participation

To date, public fleet participation in the Clean Vehicle Rebate Project has been low (86 vehicles equaling 0.04 percent of total funding). Impediments to clean vehicle penetration in public fleets include:

- Agency fiscal constraints
- Higher capital costs compared to traditional gas vehicle counterparts
- Charging/refueling infrastructure requirements
- Inability to access the $7,500 federal tax credit for clean vehicle purchases

Recognizing these impediments, an option to increase public fleet participation is to increase the rebate amounts specifically for public fleets. A $500,000 set aside for public fleets would be enough to more than double fleet participation given the rebate amounts shown in Table 2:

Table 2: Possible Rebate Amounts for Public Fleet Vehicles

Vehicle Type	Maximum Rebate Amount
Light-Duty Zero-Emission Vehicle	
Type II, III, IV, or V (range ≥ 100 miles)	$3,750
Type I.5 (range ≥ 75, < 100 miles)	$3,000
Type I (range ≥ 50, < 75 miles	$2,250
Light-Duty Plug-in Hybrid Electric Vehicle	$2,250
Neighborhood Electric Vehicle	$1,125
Zero-Emission Motorcycle	$1,125

Evaluate Ownership Requirements

The current project requires rebate recipients to own or lease rebated vehicles for a minimum of three years (or one year for car share/rental fleets). This requirement is intended to help assure that in-state emission benefits are realized from the significant investment of public funds going into the Clean Vehicle Rebate Project. In some cases the ownership requirement may have the unintended consequence of discouraging consumers from upgrading to newer model clean vehicles. Administration associated with compliance monitoring is also significant as the number of rebates already issued nears 20,000 and thousands more are expected next fiscal year. Potential changes to the project could include lowering or potentially eliminating the ownership requirement.

Section 2: Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project

Staff Contact: Joe Calavita, jcalavit@arb.ca.gov, (916) 445-4586

Overview: The Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project offers vouchers to help California fleets purchase new hybrid and zero-emission trucks and buses on a first come, first-served basis. Hybrid and zero-emission vehicle technologies have the potential to reduce criteria pollutant, air toxic, and greenhouse gas emissions – particularly in urban delivery vehicles, refuse trucks, work trucks, buses, and other vehicles with high stop-and-go or idling duty cycles. This project is intended to spur early production volumes and lower long-term production costs for these vehicles.

Status Update: While Fiscal Year 2009-10 Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project voucher demand was high, fleet participation in Fiscal Years 2010-11 and 2011-12 declined significantly. The Board approved several program refinements as part of the Fiscal Year 2012-13 AQIP Funding Plan to stimulate demand for these vehicles, such as raising voucher amounts for zero-emission trucks and advanced technology hybrids. In addition, Hino Motor Company (Hino) – a vertically integrated hybrid truck manufacturer owned by Toyota – entered the California market in late 2012 with a more economical hybrid in the 14,000 to 19,000 lbs gross vehicle weight rating (GVWR). Hino trucks are being purchased by smaller fleets that had not previously purchased hybrid vehicles.

Voucher demand has increased in response to the Board approved program changes and the addition of Hino as an economical purchase option, with voucher demand in the fourth quarter of 2012 more than triple that of fourth quarter 2011. As of March 1, 2013, the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project has provided vouchers for 933 hybrid and 348 battery-electric zero-emission trucks and buses, mostly in urban beverage (32 percent) and package delivery (31 percent) vocations.

Implementation Challenges

Discussions with participating fleets and other project stakeholders suggest several challenges contributed to reduced voucher demand in the 2010-2012 timeframe:

- Several early adopter fleets indicated they saturated their demand for new hybrid delivery trucks at project launch in early 2010.
- Some fleets have indicated dissatisfaction with the fuel economy benefits and/or performance of their initial hybrid truck purchases and have not returned for additional vehicles.
- The low cost of natural gas fuel makes natural gas-powered trucks an attractive option relative to hybrids for fleets' limited "green vehicle" funding.

- The next iteration of early adopter fleets (particularly small and medium fleets) are more risk averse and less likely to purchase new vehicle technologies to which they are unaccustomed.

Funding Need: Staff expects a significant increase in Hybrid and Zero-Emission Truck and Bus Incentive Project voucher demand over the next year. Demand from medium and smaller fleets for Hino hybrid trucks with a lower incremental cost is expected to drive overall project demand during this time period. Table 3 below provides staff's preliminary projections of potential Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project voucher demand between the beginning of the 2013-14 fiscal year and the end of August 2014, when new Fiscal Year 2014-15 project funds could potentially become available. The range of potential voucher demand (between "Low and "High" projections) is based upon discussions with vehicle manufacturers and California fleets, and considers Proposition 1B: Goods Movement Emission Reduction Program (Goods Movement Program) co-funding and other market variables. The "High" scenario assumes about eighty percent of manufacturer projections of project-eligible vehicles manufactured for the California market come to fruition, with significant fleet demand for both Hino hybrid trucks and zero-emission vehicles co-funded by the Goods Movement Program (See discussion below). The low projection more closely mirrors project demand over the past two quarters, after the voucher amount for zero-emission vehicles was increased and the market introduction of the Hino hybrid.

Table 3: Projected Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project Funding Demand

	Vehicles	Estimated Need
Low	200	$5M
High	400	$35M

Concepts for discussion:

Battery-Electric Vehicle Voucher Amounts Based Upon Battery Capacity

Currently, zero-emission battery-electric vehicle voucher amounts are based upon the vehicle's GVWR. Staff invites public comments regarding whether battery-electric vehicle voucher amounts should be based upon a vehicle's battery capacity in order to better incentivize sale of electric trucks and buses tailored to fleets' specific range and power needs. If enacted, such a modification would likely provide a declining dollar amount per kilowatt-hour (Kwh) of battery capacity over a certain threshold (for example, $500 per Kwh for the first 100 Kilowatts and $100 per Kwh thereafter).

Additional Funding For Fast Charge Compatible Vehicles

Staff is considering providing zero-emission vehicles that are compatible with fast charging infrastructure with an additional voucher amount due to their "unlimited" daily range relative to traditional charging technology.

First Three Vehicles' Voucher Enhancement to Include Previous Year Purchases

The up to $10,000 voucher enhancement for the first three vouchers per fleet is intended to further encourage additional fleets and smaller fleets to purchase a hybrid or zero-emission truck or bus. Currently, a fleet is eligible for the voucher enhancement for the first three vehicles in each funding year, even if it had received this enhancement in previous funding years. To help Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project funds to go further and better target new and smaller fleets, staff is considering that beginning in Fiscal Year 2013-14 only the first three vouchers *inclusive of all funding years* would be eligible for the additional voucher enhancement.

Update Assumed Incremental Cost for Hybrid Vehicles

Staff is considering updating assumed incremental cost for hybrid vehicles based upon new information indicating lower average incremental costs for some hybrid vehicle weights. Incremental cost is defined as the cost difference between a conventional new truck or bus and an HVIP-funded vehicle.

Require Stronger Three-Year Warranty

The Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project warranty requirement may need to be strengthened to specify the manufacturer warranty covers not just the vehicle battery but the entire vehicle, engine (if applicable), motor, drive train, battery, parts and labor for a full three year period.

Enhanced Voucher for Extended Warranties

Staff is considering an additional incentive amount for extended vehicle warranties in order to provide purchasing fleets with greater certainty regarding vehicle reliability, maintenance costs, and battery life. Staff seeks comments on an additional $2,000 voucher amount for each additional year of warranty coverage between six to ten years and/or mileage coverage above a certain threshold.

Goods Movement Emission Reduction Program Set-Aside

Recently adopted updates to the Goods Movement Program will provide an opportunity for fleets to combine Goods Movement Program and Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project funds for eligible zero-emission trucks over 19,500 lbs gross vehicle weight operating in California's freight corridors. Staff is considering setting aside a portion of the FY 2013-14 Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project funding allocation for vehicles that also receive Goods Movement Program funding to ensure vouchers will be available for participating vehicles at the end of the goods movement program solicitation and grant agreement process.

Simplify Vehicle Eligibility Application Process

Staff seeks comments on replacing the multiple vehicle vocations identified in project vehicle eligibility applications with three discrete vehicle types – truck, bus, and utility vehicle with electric power take-off. ARB would continue to track vehicles funded by vehicle vocation, but eligibility applications would be based upon these three general vehicle types.

Clarify that Battery Leasing is Allowed

Staff is aware that an additional ownership option is available that allows for the purchase of an advanced technology truck combined with leasing of the battery component. Staff anticipates clarifying that purchases of vehicles with leased batteries are eligible for Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project funding, as long as the vehicle and battery meet all project criteria and the battery lease term is at least three years.

Section 3: Advanced Technology Demonstration Projects

Staff Contact: Earl Landberg, elandber@arb.ca.gov, (916) 323-1384

Overview: Advanced Technology Demonstration Projects accelerate advanced emission reducing technologies that are on the cusp of commercialization into the California marketplace. A public investment in these technologies helps to achieve significant emission reductions of criteria pollutants and toxic air contaminates, as well as greenhouse gases, sooner than would be possible otherwise. This commitment from the State encourages industry to expeditiously invent, develop, test, and introduce cutting edge emission reducing technologies. Finally, Advanced Technology Demonstration Projects leverage public investment with private capital and ingenuity to go beyond what is currently at the technological forefront.

Funding Advanced Technology Demonstration Projects carries inherent complexities and engineering challenges. ARB mitigates this potential by requiring a competitive selection process to award funding to the most promising technologies, requiring a significant cost share from technology demonstrators, and requiring that project applicants be a California-based public agency with expertise in the project category. Grants are awarded to public agencies to manage the day-to-day administration of the projects with ARB oversight. Typically public agencies are local air districts, port authorities, or public school districts, but other agencies are eligible. The team concept for demonstration projects, with technology demonstrators partnering with a local public agency and one or more end-users, has proven to be effective and is planned to continue for future projects.

Status Update: Throughout the first four years of Advanced Technology Demonstration Projects (Fiscal Year 2009-10 through Fiscal Year 2012-13), AQIP has funded 13 separate projects totaling $5.6 million, ranging from locomotive retrofits to hybrid marine demonstrations. AQIP investment has leveraged $6.3 million in match funding from grantee and technology demonstrators resulting in a total of $12 million of demonstration funding.

For Fiscal Year 2012-13, $2 million was allocated for demonstration projects, with a focus on zero-emission off-road equipment and zero-emission transit vehicles. The Zero-Emission Off-Road Equipment solicitation resulted in the selection of a battery-electric yard truck project for demonstration at the Port of Los Angeles and Port of Long Beach. The Zero-Emission Transit demonstration project solicitation is proposed to be rolled over into the Fiscal Year 2013-14 Funding Plan. This carry over is due to the timing in which revenues are collected, balanced by the demonstrated funding need for AQIP's deployment projects.

Funding Needs: Significant advancements have been made to reduce emissions from conventional vehicles and equipment, such as intergrading hybrid technologies in cars, trucks, vessels and construction equipment. However, these advances alone are not

sufficient for California to meet its longer term air quality and climate change goals. A larger public investment in advanced technologies is needed. AQIP is one of few opportunities the State has for investing in Advanced Technology Demonstration Projects.

AQIP investments in Advanced Technology Demonstration Projects have been modest thus far. Staff believes that substantially higher investments, in the magnitude of $10 million per year or more, are needed to demonstrate larger-scale technology durability and efficacy to foster confidence such that industry invests private capital to bring these technologies to the marketplace sooner than they would otherwise. Larger public investments also help encourage the acceleration of advanced technologies in new sectors.

Concepts for Discussion: In addition to investing in new technology-advancing projects, AQIP has the opportunity to expand upon previous projects to gain a more robust portfolio of emission reducing technologies. The projects identified below include new and existing project types that would benefit from continued investment.

Proposed Fiscal Year 2013-14 Advanced Technology Demonstration Projects

- Multiple Locomotive Diesel Particulate Filter Demonstration
- Tier-4 Locomotives
- Hybrid and Other Advanced Locomotive Technologies
- Marine Vessel Hybridization
- Advanced Ferries
- Ground Support Equipment
- Advanced Freight Transport, including dual-mode hybrid and fully electric freight trucks
- Advanced Distribution Center Equipment
- Advanced Off-Road Equipment Demonstration
- Advanced Agricultural Equipment
- School Buses

Pursuing all the above proposed projects for inclusion in the Funding Plan is not possible with the current level of AQIP funds. However, staff proposes that these projects be prioritized for funding based on the State's long-term air quality and climate goals, the needs of local air districts, and the California market place.

Section 4: Truck Loan Assistance Program

Staff Contact: Krista Fregoso, kfregoso@arb.ca.gov, (916) 445-5035

Overview: In 2008, the California Legislature directed a one-time appropriation of AQIP funds for use in establishing a loan assistance program to aid small business truck owners affected by ARB's In-Use Truck and Bus Regulation and the Tractor-Trailer Greenhouse Gas Regulation. Formally known as the Providing Loan Assistance for California Equipment Program, about $31 million has been allocated to assist truckers. To date, ARB has developed and implemented two components of the Providing Loan Assistance for California Equipment Program: a small Pilot Revolving Loan/Lease-to-Own Program, and the Truck Loan Assistance Program. The Truck Loan Assistance Program makes up the largest portion of the Providing Loan Assistance for California Equipment Program, with $30.3 million allocated to date. More information regarding the small Pilot Revolving Loan/Lease-to-Own Program can be found in the Fiscal Year 2012-13 AQIP Funding Plan, under Appendix A.

Launched in April 2009, the successful and ongoing Truck Loan Assistance Program utilizes AQIP funds to aid smaller fleets in obtaining financing for clean truck upgrades ahead of regulatory compliance schedules. Based on the California Pollution Control Financing Authority's California Capital Access Program, the Truck Loan Assistance Program enables lenders to provide affordable financing to small business owners that fall just outside conventional underwriting standards and that may not qualify for traditional financing, particularly in California's volatile economic climate and tight credit market. In the current program, AQIP funds are set aside in each participating lender's loan loss reserve account for eligible loans (based on a percentage of each enrolled loan amount) to cover potential losses resulting from defaults.

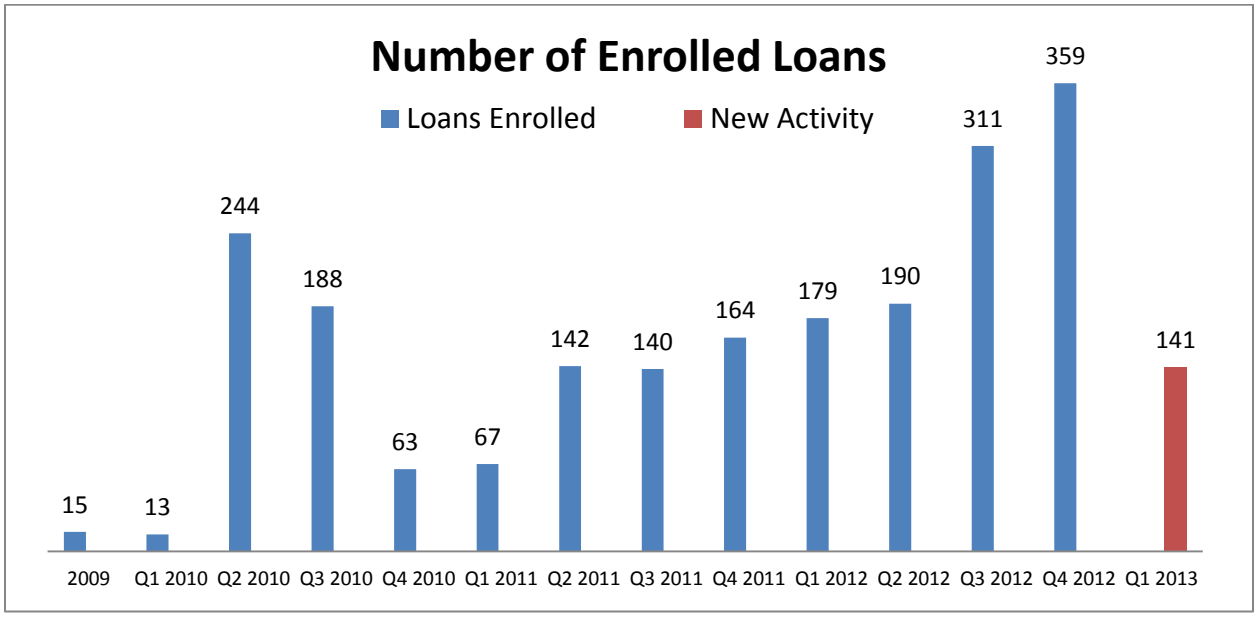
The California Capital Access Program model, a form of loan portfolio insurance, is advantageous for two primary reasons. First, by reducing the financial risk to lenders, it creates opportunities for small business truck owners that fall below normal lending criteria and may not qualify for any financing. Second, it provides an inherent benefit of fund leveraging to significantly increase the overall amount of financing available to truck owners. To date, for every $1.00 ARB has spent in the program for loan assistance, participating lenders have provided about $6.50 in financing to a trucker.

Status Update: Over the past year, participation in the Truck Loan Assistance Program has grown rapidly as regulatory compliance deadlines near. As of January 29, 2013, approximately $22.7 million in Truck Loan Assistance Program funding has been leveraged to provide nearly $148 million in financing to small business truckers for the purchase of nearly 2,600 cleaner trucks, exhaust retrofits, and trailers. Table 4 below provides the breakdown of loans offered, and Figure B illustrates the program's activity since 2009. To date, over 79 percent of all enrolled loans are issued to owner operators with one truck and 94 percent are issued to fleet owners with 10 or fewer employees.

Table 4: Truck Loan Assistance Program Status

Vehicles/Equipment Financed as of January 29, 2013					
Program	**Number of Loans Issued**	**Number of Projects Financed**	**Project Type**	**$ Spent**	**Total Amount Financed**
ARB/CPCFA Truck Loan Assistance Program	2,207	2,383	Truck Purchases	$22.7M	$148.4M
		189	Exhaust Retrofits		
		13	Trailers		

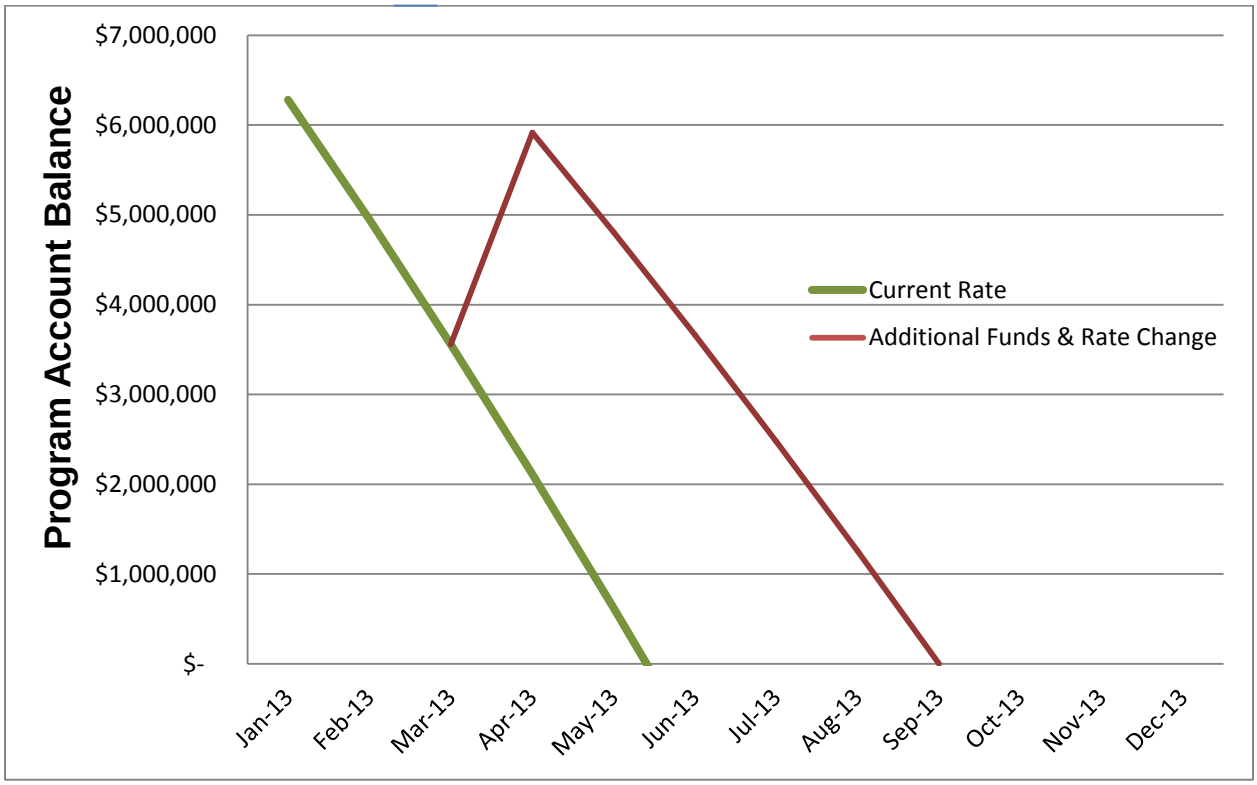
Figure B: Truck Loan Assistance Program Activity



Funding Status

Although the program began in mid-2009, over half of the total loans issued through the program occurred since the start of 2012, as can be seen in Figure A above. As of the end of January 2013, about $6 million remained in program funding. Under funding provided to date, and based on current activity trends and program conditions, the remaining funds are projected to be depleted in the mid-June timeframe. ARB's current Interagency Agreement with the California Pollution Control Financing Authority to implement the program and fund loan assistance runs through December 2013. At its March 21, 2013, public meeting, the Board approved authority for the Executive Officer to reallocate up to $4 million from the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project for Fiscal Year 2012-13 to the Truck Loan Assistance Program. As shown in Figure 3, this additional funding (along with a minor program change to slightly decrease the ARB's loan loss reserve contribution for each eligible loan) will potentially extend the program through the September timeframe but funding will still be depleted before the end of 2013.

Figure C: Calendar Year 2013 Funding Status



Funding Needs: With ongoing regulatory deadlines in the 2014 – 2016 timeframe for ARB's diesel vehicle regulations, ARB staff expects a continued strong demand for program funding to assist the small business trucking sector in financing truck upgrades ahead of compliance schedules. Current activity trends reflect a recent acceleration in program participation and we expect that to continue throughout the remainder of 2013 and throughout 2014.

Remaining need through December 2013

We estimate an additional $4 million in funding is necessary to extend the program through the end of December and complete the term of the ARB's current Interagency Agreement with the California Pollution Control Financing Authority.

Need for December 2014 through June 2014

The projected total 2014 annual need to continue the program beyond 2013 is approximately $19.4 million. We estimate that nearly $10 million, half of the total 2014 need, is necessary to continue the program through June of 2014.

Chapter 3: Fiscal Year 2012-13 Project Solicitations

Staff is proposing to release project solicitations based on the minimum allocations early in Fiscal Year 2013-14 after Board approval of the Funding Plan. However, ARB is not able to enter into grant agreements until the State budget has been approved. Staff anticipates the Clean Vehicle Rebate Project solicitation will be ARB's first priority; it is staff's goal to make Fiscal Year 2013-14 funding available to clean vehicle consumers as quickly as possible and before the current funds are exhausted, if possible.

There will not be a project solicitation for the Truck Loan Assistance Program, as the project is currently under contract with the California Pollution Control Financing Authority.