



Air Resources Board



Matthew Rodriguez
Secretary for
Environmental Protection

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Edmund G. Brown Jr.
Governor

TO: Jack Kitowski, Chief
Mobile Source Control Division

FROM: Cynthia Marvin, Chief
Transportation and Toxics Division

DATE: April 19, 2016

SUBJECT: GREENHOUSE GAS REDUCTION FUND: AIR RESOURCES BOARD
REVISED EXPENDITURE RECORD FOR FISCAL YEAR 2015-16 - LOW
CARBON TRANSPORTATION

Thank you for submitting the final revised expenditure record (attached) on behalf of Air Resources Board's (ARB) Mobile Source Control Division on April 5, 2016 to satisfy the requirements of Senate Bill 1018 (Budget and Fiscal Review Committee, Chapter 39, Statutes of 2012) for expenditures from the Greenhouse Gas Reduction Fund (Fund). We appreciate the iterative consultation process with your staff on the development of this record to support expenditures from the Fund for the Low Carbon Transportation Program.

This memorandum documents that ARB's Transportation and Toxics Division concurred on April 19, 2016 that the attached record is consistent with the statutory requirements of Government Code Section 16428.9 and with ARB's expectations, as documented in the *Funding Guidelines for Agencies that Administer California Climate Investments*.

The ARB Revised Expenditure Record for the Low Carbon Transportation Program for Fiscal Year 2015-16, along with this memorandum, will be published on the ARB Cap-and-Trade Auction Proceeds website at: www.arb.ca.gov/auctionproceeds.

If you have any questions concerning this memorandum, please contact me at (916) 324-0062 or via email at Cynthia.Marvin@arb.ca.gov.

Attachment

cc: See next page.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Greenhouse Gas Reduction Fund: Expenditure Record
Fiscal Year: 2015-16

Air Resources Board
Low Carbon Transportation Investments

Revised to Reflect \$95 Million Appropriation

The Low Carbon Transportation investments expand existing Air Resources Board (ARB) clean transportation programs that provide incentives for zero-emission and plug-in hybrid passenger vehicles, clean trucks and buses, and advanced freight and other heavy-duty technology to achieve greenhouse gas (GHG) reductions along with criteria pollutant and air toxics co-benefits with an emphasis on investments that benefit disadvantaged communities. These investments are being implemented through the administrative framework established for ARB's Air Quality Improvement Program (AQIP). The following is the ARB's fiscal year (FY) 2015-16 expenditure record for Greenhouse Gas Reduction Fund (GGRF) funds for Low Carbon Transportation Investments.

ARB prepared a preliminary expenditure record in August 2015 for the \$350 million Low Carbon Transportation funding in the Governor's proposed 2015-16 State budget. At that time, the Legislature had not acted on the Governor's proposal, so the preliminary expenditure record was contingent upon appropriation of funds. In September 2015, the Legislature appropriated \$90 million in FY 2015-16 Low Carbon Transportation project funding and \$5 million in associated State operations funding to ARB in Senate Bill (SB) 101 (Committee on Budget and Fiscal Review, Chapter 321, Statutes of 2015). This revised expenditure record describes how the \$90 million in project funding will be invested.

The \$90 million is intended to provide continued funding for existing projects in order to avoid implementation disruptions. On October 22, 2015, ARB approved modifications to the *Fiscal Year 2015-16 Funding Plan for Low Carbon Transportation Investments and the Air Quality Improvement Program* at a public meeting to allocate the \$90 million to the three ongoing vehicle rebate and voucher projects started in previous budget cycles. These are the Clean Vehicle Rebate Project (CVRP), Enhanced Fleet Modernization Program (EFMP) Plus-Up Pilot Project to Benefit Disadvantaged Communities (car scrap and replacement), and the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP). Each of these projects receives applications from consumers on an ongoing basis and needs additional funding to continuing operating without interruption.

Element (1): Description of each expenditure proposed to be made by the State agency pursuant to the appropriation.

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- | | |
|--|--|
| <input type="checkbox"/> Agency that will administer funding | <input type="checkbox"/> Air Resources Board (ARB) |
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- | | |
|---|---|
| <input type="checkbox"/> Amount of proposed expenditure and appropriation | <input type="checkbox"/> This expenditure record covers the \$90 million in project funds and \$5 million in associated State operations appropriated by the Legislature in SB 101. |
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Air Resources Board Expenditure Record for Low Carbon Transportation Investments

reference	
<input type="checkbox"/> Estimated amount of expenditures for State agency administrative costs	<ul style="list-style-type: none"> ▪ \$5 million for State administrative costs associated with the Low Carbon Transportation investments was appropriated to ARB in SB 101.
<input type="checkbox"/> If applicable, identify laws or regulations that govern how GGRF funds will be used.	<ul style="list-style-type: none"> ▪ AB 1532 (Pérez, Chapter 807, Statutes of 2012), SB 535 (de León, Chapter 830, Statutes of 2012), SB 1018 (Budget and Fiscal Review Committee, Chapter 39, Statutes of 2012), and SB 862 (Committee on Budget and Fiscal Review, Chapter 36, Statutes of 2014) provide the general framework for how the auction proceeds will be administered to further the purposes of AB 32. ▪ In addition to these laws, two laws provide additional guidance on ARB’s Low Carbon Transportation appropriations: <ul style="list-style-type: none"> • SB 1275 (De León, Chapter 530, Statutes of 2014) establishes the Charge Ahead California Initiative with the goals of placing one million zero-emission and near-zero emission vehicles in California by 2023 and increasing access to these vehicles for lower-income consumers and consumers in disadvantaged communities. SB 1275 directs ARB to make a number of changes to CVRP including limiting consumer eligibility based on income, ensuring that rebate levels can be phased down, and conducting various planning and technology assessment activities, among other provisions. SB 1275 also directs ARB to establish programs to increase access to electric transportation for disadvantaged, low-income, and moderate-income communities and consumers. • SB 1204 (Lara, Chapter 524, Statutes of 2014) creates the California Clean Truck, Bus, and Off-Road Vehicle and Equipment Technology Program, funded with auction proceeds from GGRF, to support the development, demonstration, precommercial pilot, and early commercial deployment of zero-emission and near-zero emission technologies with priority given to projects that benefit disadvantaged communities. SB 1204 establishes specific requirements related to how ARB prioritizes project categories and selects projects.
<input type="checkbox"/> Continuation of existing Expenditure Record	<ul style="list-style-type: none"> ▪ This fiscal year’s appropriation will support a continuing program that will fund the same types of projects that have already been funded under Expenditure Records for FY 2013-14 and FY 2014-15.
<input type="checkbox"/> Project category	<p>Transportation and Sustainable Communities</p> <ul style="list-style-type: none"> ▪ Low Carbon Transportation
<input type="checkbox"/> Type of projects that	<p>Consistent with the budget appropriation, ARB approved the proposed <i>Fiscal Year 2015-16 Funding Plan for Low Carbon Transportation Investments</i></p>

Air Resources Board Expenditure Record for Low Carbon Transportation Investments

will be eligible for funding

and the Air Quality Improvement Program (Funding Plan) at a public meeting on June 25, 2015 and modified it on October 22, 2015.¹ The Funding Plan describes in detail each of the Low Carbon Transportation expenditures that will be made pursuant to this appropriation. These projects are summarized in Table 1.

Table 1: FY 2015-16 Low Carbon Transportation Project Allocations

Project Category	Funding (million)
Light-Duty Vehicle Projects (SB 1275)¹	
CVRP	\$75
Light-Duty Pilot Projects to Benefit Disadvantaged Communities <ul style="list-style-type: none"> • EFMP Plus-Up 	\$10
Heavy-Duty Vehicle Projects (SB 1204)¹	
HVIP	\$5
State Operations for Low Carbon Transportation	\$5
Total	\$95

¹The \$85 million in light-duty projects are funded pursuant to SB 1275; the \$5 million in heavy-duty projects are funded pursuant to SB 1204.

Each of these Low Carbon Transportation projects was started with ARB's FY 2014-15 Low Carbon Transportation appropriation or earlier. The projects are briefly described below:

- **CVRP:** This project provides consumer rebates, available on a first-come, first-served basis statewide, for the purchase of new zero-emission and plug-in hybrid passenger vehicles. CVRP has operated since 2010, and the FY 2015-16 GGRF funding will enable the project to expand to meet increasing consumer demand. This project provides GHG benefits because the eligible zero-emission and plug-in hybrid passenger vehicles emit less GHGs on a lifecycle basis than conventionally fueled models.
- **Light-Duty Pilot Projects Benefiting Disadvantaged Communities:** These projects, which complement CVRP, are aimed at increasing use of the cleanest light-duty vehicles in disadvantaged communities and lower-income households. These pilot projects provide GHG benefits by enabling the purchase of lower GHG emitting passenger vehicles. For the FY 2015-16, pilot project funding is limited to EFMP Plus-up.
 - **EFMP Plus-up:** This pilot is operated in conjunction with EFMP, the voluntary vehicle retirement (car scrap) and replacement program implemented by ARB in coordination with the Bureau of Automotive Repair, South Coast Air Quality Management District and San Joaquin Valley Air Pollution Control District. The pilot provides additional incentives above the base EFMP incentive for lower-income

¹ Fiscal Year 2015-16 Funding Plan for Low Carbon Transportation Investments and the Air Quality Improvement Program, http://www.arb.ca.gov/msprog/aqip/fundplan/proposed_fy15-16_funding_plan.pdf
http://www.arb.ca.gov/msprog/aqip/fundplan/final_meeting_notice_october15.pdf

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	<p>consumers who retire older vehicles and replace them with used or new hybrid, plug-in hybrid, or zero-emission vehicles. The pilot is limited to areas that provide benefits to disadvantaged communities in the San Joaquin Valley and South Coast regions.</p> <ul style="list-style-type: none"> ▪ HVIP: This project provides vouchers, available on a first-come, first-served basis statewide, to help California fleets offset the higher up-front cost of purchasing medium- and heavy-duty hybrid and zero-emission trucks and buses. HVIP has operated since 2010, and the FY 2015-16 GGRF funding will enable the project to expand to meet increasing demand and target disadvantaged communities. This project provides GHG benefits because the eligible zero-emission and hybrid trucks and buses emit less GHGs on a lifecycle basis than conventional diesel-fueled models.
<ul style="list-style-type: none"> □ Intended Recipients 	<ul style="list-style-type: none"> ▪ Consumers who purchase light-duty passenger vehicles; public and private truck and equipment owners and fleets; transit fleets; school bus fleets; advanced technology vehicle and equipment manufacturers and dealers.
<ul style="list-style-type: none"> □ Process for selecting projects for funding 	<ul style="list-style-type: none"> ▪ The approved Funding Plan describes the process for selecting projects. In the case of CVRP and HVIP, a project administrator is selected via competitive solicitation, and rebates or vouchers are then awarded to qualifying applicants on a first-come, first-served basis. For EFMP Plus-up, funding is awarded to the South Coast AQMD and San Joaquin Valley APCD via grant agreement who each implement the project at the local level.

Element (2): Description of how a proposed expenditure will further the regulatory purposes of Division 25.5 (commencing with Section 38500) of the Health and Safety Code, including, but not limited to, the limit established under Part 3 (commencing with Section 38550) and other applicable requirements of law.

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- How the expenditure is reflected in the three-year Investment Plan and the Scoping Plan
- Consistent with Investment Plan: Health and Safety Code section 39718 requires that all GGRF moneys be appropriated in a manner that is consistent with the Administration's three year Investment Plan. The 2013 *Cap-and-Trade Auction Proceeds Investment Plan: Fiscal Years 2013-14 through 2015-16*² (Investment Plan) identified clean transportation as a priority investment category because the transportation sector is the largest source of both GHG emissions and criteria pollutant precursor emissions (i.e., the emissions that form ozone and particulate matter air pollution). Appendix B of the Investment Plan describes the recommended types of projects that could be funded in the Low Carbon Transportation category. These include funding for zero- and near zero emission passenger vehicles and transit buses and low-carbon freight development, demonstration, and deployment projects. The Investment Plan also identifies ARB's AQIP as a program that could serve as a model or mechanism to implement these incentives. Therefore, the expenditures described in this record are consistent with the Investment Plan and align with the priorities presented in the Plan.
 - Implements Climate Change Scoping Plan Recommendation: The *First Update to the Climate Change Scoping Plan*, released in May 2014, identified key strategies and recommendations to continue reducing GHG emissions and achieve the goals and purposes of AB 32. One of the key recommended actions for the transportation system is:

"ARB, CEC, CPUC, and CDFG will support growing markets for clean passenger transportation, advanced technology trucks and equipment, and low-carbon transportation fuels and energy, including any necessary infrastructure."³

The Low Carbon Transportation expenditures described in the record will help implement this Scoping Plan recommendation.

² *Cap-and-Trade Auction Proceeds Investment Plan: Fiscal Years 2013-14 through 2015-16*, Release Date: May 14, 2013 http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/final_investment_plan.pdf

³ *First Update to the Climate Change Scoping Plan: Building on the Framework Pursuant to AB 32 The California Global Warming Solutions Act of 2006*, May 2014 http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf

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Element (3): Description of how a proposed expenditure will contribute to achieving and maintaining greenhouse gas emission reductions pursuant to Division 25.5 (commencing with Section 38500) of the Health and Safety Code.

<p>□ Describe how expenditures will achieve GHG reductions or net GHG benefits</p>	<ul style="list-style-type: none">▪ <u>Direct GHG Emission Reductions</u>: These Low Carbon Transportation investments will further the purposes of AB 32 by directly reducing GHG emissions. Each project provides funding for the purchase or demonstration of zero or near-zero emission vehicles or equipment that emit less GHG emissions than comparable conventionally fueled vehicles or equipment.▪ These expenditures will provide both immediate and longer-term GHG emission reductions. ARB has already reported on interim progress on its FY 2014-15 Low Carbon Transportation appropriation including GHG emission reductions and disadvantaged community benefits in the March 2016 <i>Annual Report to the Legislature on Investments of Cap-and-Trade Auction Proceeds</i>.▪ In addition to the direct GHG emission reductions from the vehicles funded in each of these projects, these expenditures set the stage for greater, indirect reductions in the future by accelerating large-scale market penetration of advanced lower GHG-emitting transportation technologies. These longer-term program benefits accrue primarily from overcoming deployment barriers, reducing production costs, promoting consumer acceptance, and accelerating technology transfer to other sectors.
<p>□ Expected time frame when reductions will be achieved and how expenditure will maintain GHG reductions or net GHG benefits</p>	<ul style="list-style-type: none">▪ CVRP is oversubscribed with consumer demand for clean vehicle rebates growing each year. FY 2015-16 funding for CVRP started yielding GHG reductions in 2015 via rebates for clean cars and will maintain these benefits for the estimated 15 year life of the vehicles funded.▪ FY 2015-16 funding for HVIP started yielding GHG reductions in 2016 via vouchers for clean trucks and buses and will maintain these benefits for the estimated 15 year life of the trucks and buses funded.▪ FY 2015-16 funding for EFMP Plus-up started yielding GHG reductions in 2016 via funding for lower-income consumers living in or near-disadvantaged communities in the South Coast and San Joaquin Valley who retire older vehicles and replace them with used or new hybrid, plug-in hybrid, or zero-emission vehicles and will maintain these benefits for the estimated 3 year project life of the vehicles funded.

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Element (4): Description of how the State agency considered the applicability and feasibility of other nongreenhouse gas reduction objectives of Division 25.5 (commencing with Section 38500) of the Health and Safety Code.

<p>□ Expected co-benefits, particularly environmental, economic, public health and safety</p>	<ul style="list-style-type: none">▪ In addition to reducing GHG benefits, these expenditures will provide air quality, public health, disadvantaged community, and economic benefits. ▪ <u>Air Quality and Public Health Benefits:</u> All clean vehicle projects will reduce criteria pollutant forming emissions of nitrogen oxides (NOx), reactive organic gases (ROG), and particulate matter that contribute to ozone and particulate matter air pollution. By reducing NOx, ROG, and particulate matter emissions, these projects help California meet the health-based air quality standards. <p style="margin-left: 40px;">HVIP will also reduce emissions of diesel particulate matter, a toxic air contaminant, thereby reducing toxic risk to Californians.</p> <ul style="list-style-type: none">▪ <u>Economic Benefits:</u> Several companies that manufacture vehicles eligible for ARB Low Carbon Transportation funding are located in California. The incentives which encourage the purchase of these vehicles provide an economic benefit to these companies and support California jobs. For example, Electric Vehicles International (EVI) manufactures zero-emission trucks eligible for HVIP vouchers at a facility in Stockton, located within one of the census tracts identified as a disadvantaged community by the California Environmental Protection Agency. Tesla Motors manufactures zero-emission passenger vehicles eligible for CVRP rebates at a facility in Fremont, and Motiv Power Systems recently opened a facility in Hayward to produce electric trucks and buses.
<p>□ How the project will support other AB 32 objectives</p>	<ul style="list-style-type: none">▪ As noted above, the clean vehicle and equipment technologies being funded have air quality and public health co-benefits. ▪ These projects also direct investment toward disadvantaged communities in California and provide economic benefits to California based businesses.
<p>□ Percentage of total funding that will be expended for projects that are “located within” and “provide benefits to”</p>	<ul style="list-style-type: none">▪ ARB has set disadvantaged community investment targets of 40 percent of the funds to benefit disadvantaged communities and 10 percent of the funds to be invested in disadvantaged communities. ▪ To evaluate projects for funding and calculate benefits for disadvantaged communities, ARB will follow the criteria established in <i>Cap-and-Trade Auction Proceeds Funding Guidelines for Agencies that Administer California Climate Investments</i> (ARB Funding Guidelines).⁴

⁴ ARB, *Cap-and-Trade Auction Proceeds Funding Guidelines for Agencies that Administer California Climate Investments*, release date December 21, 2015.

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disadvantaged communities, per the criteria in Volume 2 of ARB's Funding Guidelines

□ Describe the disadvantaged community benefits and explain strategies the agency will use to maximize benefits.

- These expenditures will improve public health by reducing emissions from vehicles and equipment operating in or near disadvantaged communities.
- EFMP Plus-up directly increases disadvantaged community residents' access to cleaner vehicles and transportation and provides an economic benefit to those lower-income Californians that receive funding.
- HVIP provides higher voucher incentive levels for zero-emission trucks and buses that are domiciled and operated in disadvantaged communities to encourage the purchase of these vehicles in disadvantaged communities.
- The ARB Funding Guidelines require that, to the maximum extent possible, investments should result in benefits that meaningfully address an important community need. Table 2-2 of the ARB Funding Guidelines identifies some common needs of disadvantaged communities, as identified by community advocates. The FY 2015-16 Low Carbon Transportation projects meet several of these needs, including:

Public Health and Safety, Need 1	Reduce health harms suffered disproportionately by low-income residents/communities due to air pollutants.
Economic, Need 5	Reduce transportation costs and improve access to public transportation.
Environmental, Need 1	Reduce exposure to local environmental contaminants, such as toxic air contaminants, criteria air pollutants, and drinking water contaminants.
Environmental, Need 2	Prioritize zero-emission vehicle projects for areas with high diesel air pollution.

<http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/arb-funding-guidelines-for-ca-climate-investments.pdf>

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Element (5): Description of how the State agency will document the result achieved from the expenditure to comply with Division 25.5 (commencing with Section 35800) of the Health and Safety Code.

<p>□ How the agency will track and report progress to make sure projects are implemented per GGRF requirements</p>	<ul style="list-style-type: none"> ▪ Through its grant agreements, ARB will require funding recipients to maintain records and submit regular status reports. In addition, ARB will conduct periodic reviews of selected projects. If a funding recipient does not perform in accordance with program requirements, the recipient will be subject to the remedies for non-performance.
<p>□ Approach to document net GHG reductions before and after project completion. Include citations for references that support methodology.</p>	<ul style="list-style-type: none"> ▪ ARB will use several mechanisms to both prospectively estimate project benefits and retrospectively document the results achieved from its expenditures. <p>ARB has provided preliminary estimates of potential benefits of proposed projects as part of the <i>Fiscal Year 2015-16 Funding Plan for Low Carbon Transportation Investments and the Air Quality Improvement Program</i>, Appendix A. Additional information on the methodology for estimating emission benefits for these projects can be found on ARB’s Quantification Materials website.⁵ These benefit estimates are consistent with calculation guidance included in ARB Funding Guidelines. As detailed project solicitations are developed and projects are implemented, ARB may also need to further refine benefit estimates in order to reflect more precisely project implementation details.</p> <p>In addition to these prospective benefits estimates, ARB will design each project to collect all data necessary to document the emission reductions achieved. ARB will include data collection and reporting requirements for funding recipients as part of its project solicitations and grant agreements or other appropriate enforceable agreements. This will include all information necessary to document the benefits for disadvantaged communities, consistent with the ARB Funding Guidelines.</p>
<p>□ Type of information that will be collected to document project results, as described in ARB guidelines</p>	<ul style="list-style-type: none"> ▪ As noted above, ARB will design each project to collect all data necessary to document the emission reductions achieved and will include data collection and reporting requirements for funding recipients as part of its project solicitations and grant agreements or other appropriate enforceable agreements. This includes the project location, the technology funded, and in some cases usage and activity data.
<p>□ How the agency will report on program status</p>	<ul style="list-style-type: none"> ▪ ARB will provide regular updates on its Low Carbon Transportation expenditures, project status, and benefits in reports prepared according to ARB Funding Guidelines. At a minimum, these reports

⁵ Quantification Materials website:
<https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm>

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will include expenditure amounts, current estimates of GHG emission reductions, and quantification of co-benefits including criteria pollutant emission reductions.

- Furthermore, two of ARB's Low Carbon Transportation projects, CVRP and HVIP, already have project websites which provide information about available funding and eligibility requirements for potential vehicle purchasers as well as demographic information about the vehicles funded to document results to the public.⁶ This provides a mechanism for the public to see project status and results on an ongoing basis.
 - ARB will report on GHG emission reductions achieved by the projects funded with the FY 2015-16 Low Carbon Transportation appropriation in future annual reports to the Legislature.
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⁶ CVRP website: <https://cleanvehiclerebate.org>

CVRP statistics website: <https://cleanvehiclerebate.org/eng/rebate-statistics>

HVIP website: <http://www.californiahvip.org/>

HVIP statistics website: https://www.google.com/maps/d/viewer?mid=z7UjTUJs1pMY.k-Ad_-XVXP_o