



CALIFORNIA
AIR RESOURCES BOARD

**Fiscal Year 2018-19 Funding Plan for
Clean Transportation Incentives**

**Public Workshop
Sacramento, California
June 15, 2018**



CALIFORNIA CLIMATE
INVESTMENTS
Cap and Trade
Dollars at Work

Workshop Agenda

Time	Session
10 am – 10:30 am	Introduction and Overview of Project Category Funding Allocations
10:30 am – Noon	Light-Duty Vehicle and Equity Investments: CVRP & Transportation Equity Projects
Noon – 1 pm	Lunch Break
1 pm – 2:30 pm	Heavy-Duty Vehicle and Off-Road Equipment Investments

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Session 1: Introduction and Overview of Funding Allocations

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Funding Plan Development Progress

- ✓ Kickoff workshop in March
- ✓ 7 work group meetings – March - June
- ✓ Draft Funding Plan released June 1
- Today's workshop
 - Additional work group meetings – June - August
 - Release proposed Funding Plan for 30-day public comment period – by September 21
 - Board considers Funding Plan – October 25-26

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\$437 Million from Two Separate Sources in Funding Plan

\$409 million	Low Carbon Transportation Program funded with Cap-and-Trade Auction Proceeds
\$28 million	Air Quality Improvement Program (AQIP)

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Other New Programs Now Underway

\$250 million	Community emission reduction incentive program to support AB 617 – Approved April 2018
\$135 million	Agricultural equipment incentive program - FARMER - Approved March 2018
\$423 million	Volkswagen NOx Mitigation Trust - Beneficiary Mitigation Plan - Approved May 25

- Not part of today's workshop
- CARB is coordinating its investment strategy among all its incentive programs

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A Closer Look at Each Funding Source Covered in Plan...

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Low Carbon Transportation Budget Appropriation



- \$175 million for CVRP
 - Continues income limits set by Legislature
- \$25 million for increased CVRP rebates for low-income applicants
- \$75 million for transportation equity projects
 - For EFMP Plus-up, financing assistance, clean mobility options, school bus replacement, etc.

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Low Carbon Transportation Budget Appropriation (cont.)



- \$134 million for heavy-duty vehicles and off-road equipment
- Continue funding Clean Truck and Bus Vouchers
- Propose new pilot for heavy-duty ZEV adoption
- Hold \$56 million in reserve to allocate where needed

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AQIP

- \$28.64 million for projects focused on criteria pollutant and toxic emission reductions
 - Staff proposes allocating full amount to projects
- Focus on projects that don't fit under Low Carbon Transportation

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Investment Priorities for 2018-19

- Support strategies in CARB’s climate change and air quality plans to meet long-term goals
 - Transform fleet to zero-emission and low NOx
 - Align with priorities in Cap-and-Trade reauthorization bill and direction in budget bills
- Maximize disadvantaged community benefits and support SB 350 study
- Consistent with long-term plan for light-duty and 3-year strategy for heavy-duty investments
- Coordinate with other funding sources

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Recommended Project Allocations: Light-Duty Vehicles and Transportation Equity

Project Category	Allocation (millions)
CVRP (standard rebates)	\$175
CVRP increased rebates for lower income consumers	\$25
Transportation Equity Projects	
EFMP Plus-up / Clean Cars 4 All	\$16
Financing Assistance	\$10
Clean Mobility Options	\$15
Agricultural Worker Vanpools	\$3
Rural School Bus	\$15
Clean Mobility in Schools (<i>new</i>)	\$10
Funding Reserve	\$6
TOTAL	\$275

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Recommended Project Allocations: Heavy-Duty Vehicles and Off-Road Equipment

Project Category	Allocation (millions)
Clean Truck and Bus Vouchers	\$68
Innovative Solutions Pilot for Zero-Emission Vehicle Adoption	\$10
Funding Reserve for Clean Trucks, Buses, and Freight	\$56
Truck Loan Assistance Program (AQIP)	\$25.6
Diesel Emission Retrofit Replacement Filters (AQIP)	\$3
TOTAL	\$162.6

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AB 1550 Disadvantaged Community and Low-Income Investment Targets

- Staff recommends 40 percent of Low Carbon Transportation funds meet AB 1550 criteria
 - ≥30 percent in disadvantaged communities
 - ≥10 percent in low-income communities or for low-income households
- Staff considers targets to be a floor and strives to exceed them
- Our broader portfolio of incentive funding also provides benefits to AB1550 populations

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Investments Support Multiple Policy Goals

Project Categories	Climate Change Scoping Plan	Short-Lived Climate Pollutants	Ozone & PM SIPs	Sustainable Freight	Air Toxics	Petroleum Reduction	Disadvantaged/Low Income Communities
CVRP	✓	✓	✓		✓	✓	✓
Transportation Equity Projects	✓	✓	✓		✓	✓	✓
HVIP - Clean Truck and Bus Vouchers	✓	✓	✓	✓	✓	✓	✓
Innovative Pilot for ZEV Adoption	✓	✓	✓	✓	✓	✓	✓
Truck Loan Assistance	✓	✓	✓	✓	✓		✓

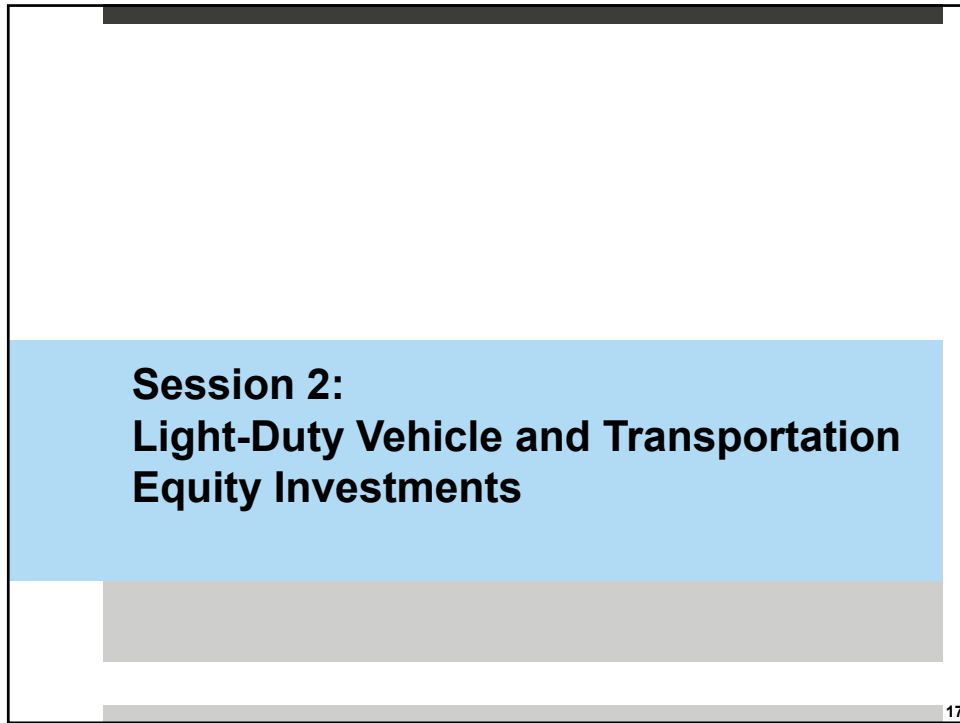
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Next Steps

- Request comments by August 31
- Post proposed Funding Plan for 30 day public comment by September 21
- Board considers Funding Plan at public meeting in Sacramento on October 25-26

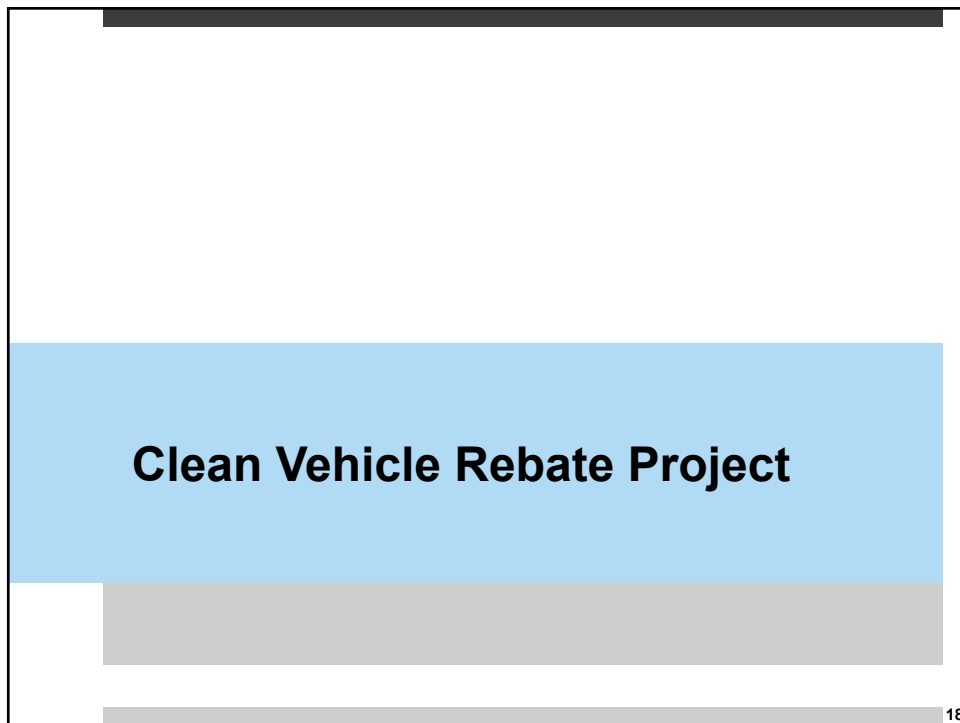
Webcast email address:
coastalrm@calepa.ca.gov

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**Session 2:
Light-Duty Vehicle and Transportation
Equity Investments**

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Clean Vehicle Rebate Project

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Project Status

- Rebate demand and market continues to grow
- Prioritizing rebates for low-income consumers
- Rebate Now launched January 30, 2018
- Outreach and education expanded
- AB 544: Choose Your Incentive
 - Applies only to FCEV rebates for consumers with incomes greater than CVRP thresholds
- Public Fleet Incentives

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CVRP and Fair Treatment of Workers

- 2017 Budget directs CARB and Labor and Workforce Development Agency to develop procedures to:
 - Certify that manufacturers of CVRP-eligible vehicles treat workers fairly
- Development status
 - Joint work group in April to receive input
 - Concept paper released for public comment in May
 - Evaluating public comments
- Expect additional direction from Legislature

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Sustainable ZEV Market & Long-Term Plan

- Continuous evaluation of ZEV market growth
 - California ZEV market share reached 4.8% in 2017
 - 40 PEV models available in California
 - All-electric vehicle range increased by 56%
 - Continuous decline in battery pack production cost
 - Global market emergence: 5% global vehicle sales in 2023
 - Secondary ZEV market still emerging
 - General ZEV awareness to be increased

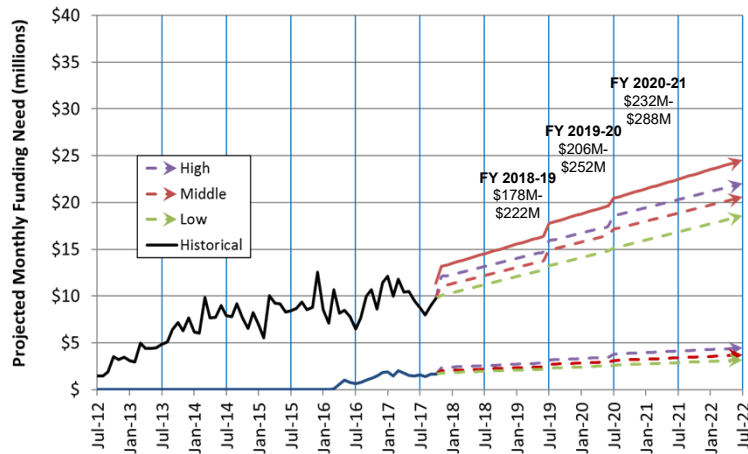
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Draft Funding Allocation

- Proposing \$200 million for CVRP
 - \$175 million for standard CVRP rebates
 - \$25 million for CVRP low-income rebates

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Projected Demand FY 2018-19 Need: \$200 Million



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CVRP Modifications Considered But No Changes Recommended

- Reducing rebates for FCEV and bringing FCEVs under income cap
- Limiting consumers to one rebate per person
- Increasing minimum all-electric range requirements for PHEVs
- Bundling funding for home charging infrastructure with low-income rebates
- Federal Tax Credit phase-out

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Solicitation Process

- Grantee selected to administer FY 2016-17 CVRP and Public Fleet Pilot Project
 - Three-year solicitation with an option to enter into a new grant
 - Staff will evaluate the need for a new grant for FY 2018-19

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Transportation Equity Investments Overview

- Pilot projects increase access to clean transportation and mobility options for lower-income residents and low-income and disadvantaged communities



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Transportation Equity Projects Priorities for FY 2017-18

- Continue increasing access to clean transportation and mobility options
- Continue to meet AB 1550 disadvantaged community and low-income/household investment requirements
- Increase investments in existing projects that show success
- Flexibility to reallocate based on demand

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EFMP Plus-up / Clean Cars 4 All Current Status

- Incentives for lower-income consumers living in or near disadvantaged communities to scrap old vehicles and buy advanced technology vehicles
- \$96 million allocated
 - \$72 million awarded to San Joaquin Valley and South Coast
 - \$10 million awarded to Bay Area and Sacramento
 - \$14 million in reserve
- Implementation status
 - \$15 million spent through March 2018 for 2,770 vehicles retired and replaced

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EFMP Plus-up Recommendations for FY 2018-19

- \$16 million recommended allocation
- Additional \$4 million from FY 2017-18 reserve brings total to \$20 million in new funding
- Allocate to air districts based on demand

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Financing Assistance Current Status

- Provide lower-income consumers low-cost loans and grants to purchase or lease advanced technology vehicles
- \$25.9 million allocated
 - \$900,000 awarded and \$2 million expansion in development for California Housing Development Corporation Bay Area project – 50 loans to date
 - \$5 million awarded to Beneficial State Foundation for Statewide project – project launched in May
 - \$18 million solicitation late 2018

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Financing Assistance Recommendation for FY 2018-19

- \$10 million recommended allocation for:
 - Statewide project via new competitive solicitation including FY 2017-18 funds and an annual option to renew over a 3-year term, or
 - Expansion of the existing statewide and/or local projects

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Clean Mobility Options for Disadvantaged Communities Current Status



- Clean mobility options, car share, vanpools, shuttles, bike share, and first mile / last mile solutions
- \$31.6 million allocated
 - \$14.6 million awarded for projects in Los Angeles, Sacramento, Bay Area, and San Joaquin Valley, and Watsonville
 - \$17 million available for a Statewide administrator

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Clean Mobility Options for Disadvantaged Communities Recommendations for FY 2018-19

- \$15 million recommended allocation
- Available for a new competitive solicitation or the expansion of the existing projects, including adding on to the Statewide administrator
- Allow flexibility of expansion for residents outside of DACs

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Agricultural Worker Vanpools Current Status and Recommendations for Fiscal Year 2018-19

- Expands access to clean transportation vanpools for agricultural workers
- \$6 million allocated and awarded to date
 - CalVans grant will provide vanpools in disadvantaged communities
- \$3 million recommended for FY 2018-19
 - Expand the existing pilot project, or
 - Include as an option in the Clean Mobility Options Pilot
 - If DAC demand is met, allow funds in low-income communities

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Rural School Bus Pilot Project Current Status

- Incentives for lower-carbon school bus choices
- \$40 million, currently administered by North Coast Unified Air Quality Management District
 - Solicitation funding requests totaled \$127 million to date
 - 43 buses have been selected to receive funding
 - Remaining funding will add at least 60 more cleaner school buses
 - New solicitation opening next week

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Rural School Bus Pilot Project Recommendation for Fiscal Year 2018-19

- \$15 million recommended allocation
 - Based on strong demand from 2017 solicitation
- No changes to project design

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Clean Mobility in Schools Project (new) Recommendation for Fiscal Year 2018-19

- New pilot to fund zero-emission vehicles, chargers, and other clean mobility options in K-12 public school districts in disadvantaged communities
- Strong stakeholder support for this proposal
- \$10 million recommended FY 2018-19
- Public process to further develop concept to continue in 2018
- Solicitation expected late 2018 or early 2019

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Session 3: Heavy-Duty Vehicle and Off-Road Equipment Investments

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Investment Priorities for 2018-19 Heavy-Duty and Off-Road Projects

- Support strategies in CARB's climate change and air quality plans to meet long-term goals
 - Transform fleet to zero-emission and low NOx
 - Align with priorities in Cap-and-Trade reauthorization bill and direction in budget bills
- Maximize disadvantaged community benefits and support SB 350 study
- Consistent with 3-year strategy for heavy-duty investments
- Coordinate with other funding sources

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SB 1204: Clean Truck, Bus, and Off-Road Vehicle Technology Program

- Guide Low Carbon Transportation Investments
- Zero- and near zero-emission vehicle and equipment projects
- Priority for projects in disadvantaged communities
- Support evolution of technology advancement
- Requires 20% of truck funding for early commercial deployment

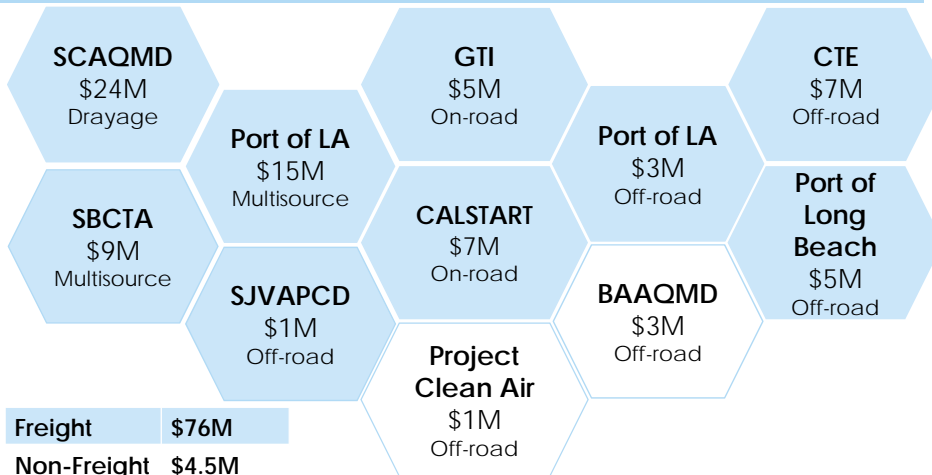
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3 Year Investment Strategy

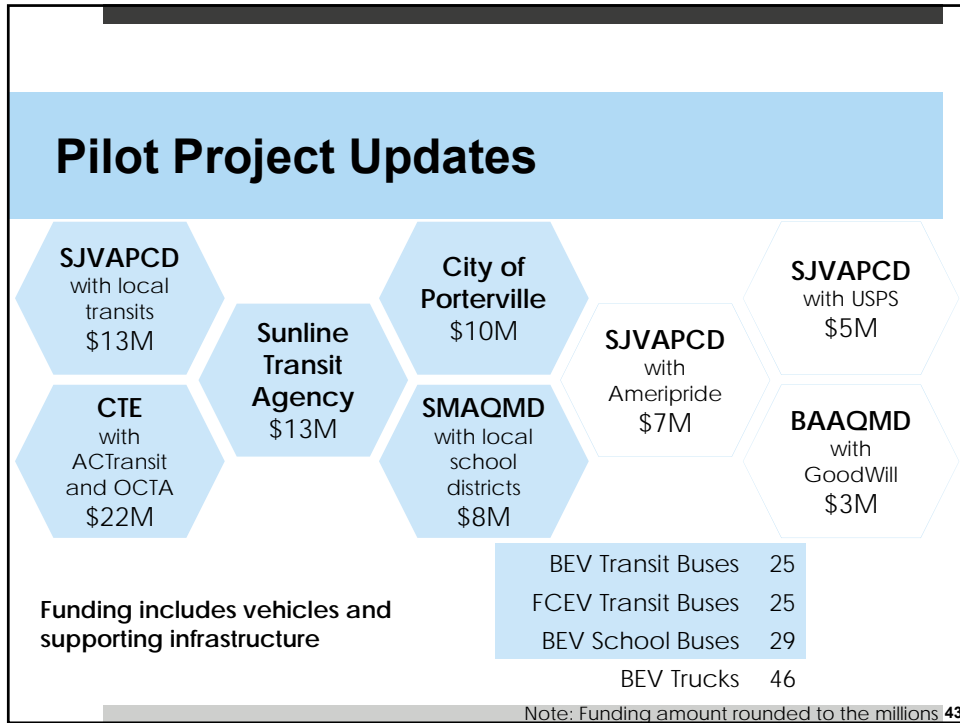
- Staff developed strategy in 2017-18 to provide recommendations for prioritizing Low Carbon Transportation and AQIP funds for heavy-duty vehicle and off-road equipment incentives
- Strategy includes:
 - Strong investment in beachheads for three key technology areas: zero-emission, low NOx, and efficiencies
 - Continued investment across the commercialization arc

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Demonstration Projects Updates



Note: Funding amount rounded to the millions 42



- ## HVIP Update
- \$309 million invested since 2010
 - Continue to help meet SB 1204 early commercial truck deployment requirement
 - Help meet AB 1550 disadvantaged community investment goals
 - 51% of HVIP funding has been in DACs
 - Interactive data tool available at:
 - <https://www.californiahvip.org/>
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Truck Loan Assistance Program

- About \$95 million State contribution to date
 - Leveraged to provide about \$1.1 billion in financing
 - 18,500 trucks, exhaust retrofits and trailers



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Other Projects Underway

- Zero- and Near-Zero Emission Freight Facilities Pilot
 - Solicitation open; closes July 19th
 - Anticipate grants executed by the end of 2018
- Off-Road Zero-Emission Commercial Freight Voucher Project
 - Solicitation to be released late summer 2018
 - Anticipate vouchers to be available early 2019

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Recommended Project Allocations: Heavy-Duty Vehicles and Off-Road Equipment

Project Category	Allocation (millions)
Clean Truck and Bus Vouchers (HVIP including Low NOx Engines)	\$68
Innovative Pilot for Zero-Emission Vehicle Adoption	\$10
Funding Reserve for Clean Trucks, Buses, and Freight	\$56
Truck Loan Assistance Program (AQIP)	\$25.6
Truck Filter Replacements (AQIP)	\$3
Total (\$134M Low Carbon Transportation/\$28.6M AQIP)	\$162.6

\$26M of \$160M Low Carbon Transportation appropriation allocated to Carl Moyer to offset tire fee

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Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) including Low NOx Engine Incentives

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Background

- HVIP Incentives encourage and accelerate the deployment of cleaner advanced technology
- Vouchers for California fleets on a first-come, first-served basis to lower the cost of clean trucks and buses
- Funding amounts intended to offset some or all of incremental costs
- No scrap required

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HVIP Incentives Funding Recommendation

- \$68 million from Low Carbon Transportation
- Carry over about \$80 million from FY 2017-18
 - Total of about \$148 million will fully fund market growth for all eligible technologies
 - Access to the reserve if needed

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HVIP Incentives Funding Recommendation (Continued)

Low NOx Engine Incentives

- Carry over remaining Low NOx set aside (\$13m)
- After Low NOx set aside is expended, Low NOx Engine Incentives will draw from combined allocation
- Continue to implement on a first-come, first-served, statewide basis

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Changes to HVIP Project Criteria

- Funding for ePTOs based on performance
- Transition funding support for terminal, yard, and other off-road use trucks to the Zero-Emission Off-Road Freight Voucher Incentive Project
- Final year of infrastructure enhancements
- Expand eligibility for smaller fuel cell trucks and buses

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Changes to HVIP Project Criteria Continued

- Strategically stack and combine other funds with HVIP
- Remove “first three” voucher enhancements
- New hybrid and hybrid conversion vehicle eligibility criteria
- Revise warranty requirement and extended warranty enhancements
- Restructure vouchers for the 8.9L and 11.9L low NOx engines
- Targeted outreach

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Innovative Pilot for Zero-Emission Vehicle Adoption



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Purpose and Desired Outcomes

- Numerous barriers to HD ZEV adoption
- Reduce real and perceived risk
- Projects to encourage ZEV adoption
 - Decreasing costs
 - Instilling confidence
 - Targeting small fleets in sectors not ideally served by existing projects
- Additional public process in 2018 to develop concept

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Truck Loan Assistance Program



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Background

- Provides financing assistance to truckers subject to the In-Use Truck and Bus Regulation for purchasing newer trucks or exhaust retrofits
- Helps small fleets (10 or fewer trucks)
- Incremental recapture of funds in place

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Truck Loan Assistance Program Funding Recommendation

\$25.6 million from AQIP

- Funds from FY 2017-18 will ensure continuous funding until FY 2018-19 funds are available

Strategies

- Consider alignment of contribution rates
- Evaluate options to meet additional demand expected by SB1 requirements

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Truck Filter Replacements



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Truck Filter Replacements

- \$3.0 million from AQIP
- Supports substrate replacements or new diesel particulate filters for vehicles operating with a Cleaire Muffler Module (CMM) empty “can” muffler

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Funding Reserve for Clean Trucks, Buses, and Freight



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Funding Reserve for Clean Trucks, Buses, and Freight

- Provides flexibility for unpredictable demand
- Prioritizes continuity of critical first-come, first-served projects
- Directs funds to HVIP, the Freight Voucher Incentive project, and/or the Freight Facility project
- Funding demand assessment with public process March 2019

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Update to the Three-Year Investment Strategy for Heavy-Duty Vehicles and Off-road Equipment

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Updates to the Three-Year Investment Strategy

- Will be included in heavy duty section of the funding plan
- Will cover:
 - Major technology advances
 - Progress made on beachheads
 - Forecasting need for 2021-22
- Work group meeting July 19

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Next Steps

- Request comments by August 31
- Post proposed Funding Plan for 30 day public comment on September 21
- Board considers Funding Plan at public meeting in Sacramento on October 25-26