CALIFORNIA
AIR RESOURCES BOARD

Proposed
Fiscal Year 2022-23 Funding Plan
for
Clean Transportation Incentives

CALIFORNIA CLIMATE INVESTMENTS
Cap and Trade Dollars at Work

Covering the Following Funding Sources:

- $710 million from the State General Fund
- $1.125 billion from Proposition 98 General Funds
- $746 million from the Greenhouse Gas Reduction Fund
- $28.64 million from the Air Quality Improvement Fund

Released: October 12, 2022

Board Consideration: November 17, 2022

Submit Written Comments:

https://ww2.arb.ca.gov/applications/public-comments

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Acknowledgments

Development of the Fiscal Year (FY) 2022-23 Funding Plan for Clean Transportation Incentives was a collaboration among staff across the California Air Resources Board, with further feedback and enhancements provided by multiple key external partners and stakeholders, including those listed below. The California Air Resources Board thanks these entities for their valuable contribution and encourage continued feedback in support of further developing this and other documents. This list is, of course incomplete, does not indicate agreement with this document, and is intended to highlight several particularly engaged stakeholders – CARB is grateful for everyone who has participated, whether or not specifically listed.

Access Clean California Outreach Partners Network
Alliance for Automotive Innovation
All Positives Possible
American Lung Association
Bay Area Air Quality Management District
Beneficial State Foundation
Better World Group
Blue Green Alliance
Breath Southern California
California Department of Transportation
California Governor's Office of Business & Economic Development
California Electric Transportation Coalition
California Energy Commission
California Interfaith Power and Light
California New Car Dealers Association
California State Transportation Agency
California Transit Association
CALSTART
Center for Community Action & Environmental Justice
Center for Energy Efficiency and Renewable Technology
Center for Sustainable Energy
Center for Transportation and the Environment
Central California Asthma Collaborative
Charge Ahead Coalition
CivicWell
Coalition for Clean Air
Coltura
Comite Civico del Valle
Community Housing Development Corporation
Communities for a Better Environment
Cool the Earth
Earth Justice
East Yard Communities for Environmental Justice

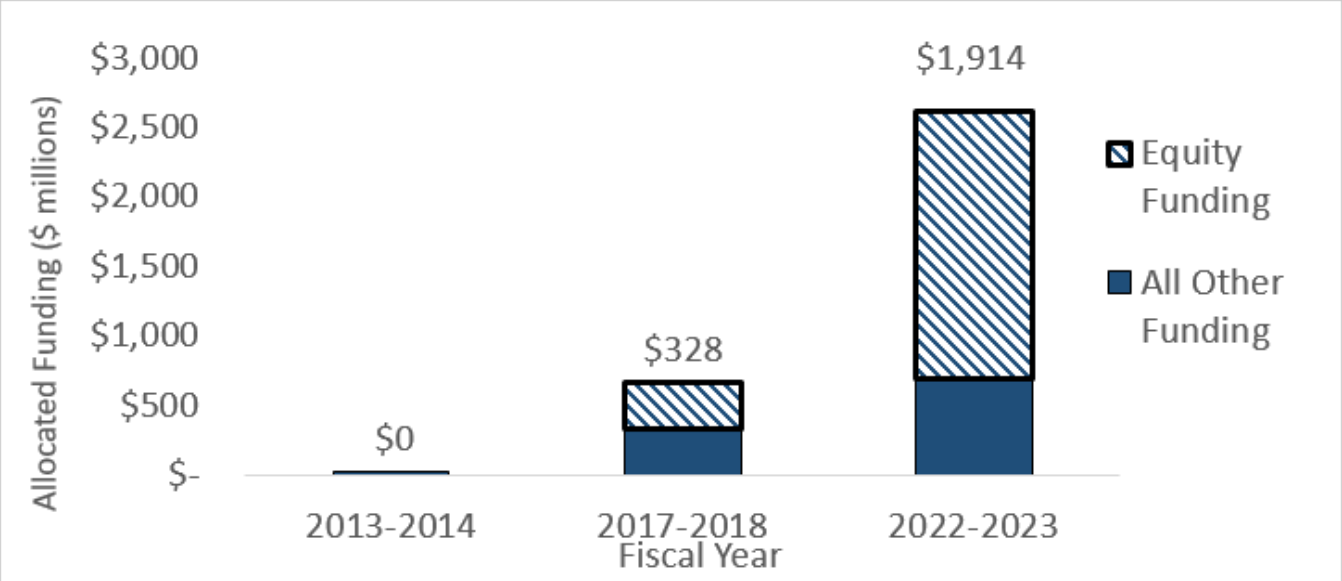
Environment California
GRID Alternatives
First Generation Environmental Health & Economic Development
Healthy Active Streets
International Brotherhood of Electrical Workers Local 11
Los Angeles Alliance for a New Economy
Los Angeles County Electric Truck & Bus Coalition
Native American Environmental Protection Coalition
Natural Resource Defense Council
Proterra
Recurrent Automotive
Regional Asthma Management and Prevention
Sacramento Metropolitan Air Quality Management District
San Diego Air Pollution Control District
San Joaquin Valley Air Pollution Control District
San Pedro & Peninsula Homeowners Coalition
Service Employees International Union
Sierra Club
Shared-Use Mobility Center
South Coast Air Quality Management District
Tesla
The Greenlining Institute
Union of Concerned Scientists
University of California, Davis Institute of Transportation Studies

Executive Summary

The Funding Plan for Clean Transportation Incentives allocates a historic amount of incentive funding that ensures everyone can benefit from the transition to zero emission mobility. This year's investments include a special focus on underserved communities, small businesses, and others who will especially benefit from public funds in addition to the large volumes of private investment going into this space. Recognizing that we need transportation system change, not just clean vehicles, it also focuses funds on community-led efforts to create walkable, bikeable, transit-friendly places for all.

This year's Funding Plan accelerates these historic commitments. In the current FY covered by this Plan, staff estimate over 70 percent of $2.61 billion in funds is expected to benefit priority populations – a marked shift from a decade ago, when no funds were appropriated to CARB specifically to benefit these communities. This Funding Plan is allocating funds, consistent with the Governor and Legislature's budget priorities, to invest in a California for all.

ES–1: Glimpse of Investments In and Benefitting Priority Populations Over the Years



The Funding Plan serves as the annual blueprint for expending the Clean Transportation Incentives funds appropriated to the California Air Resources Board (CARB or Board) in the state budget. The Funding Plan establishes CARB's priorities for the funding cycle, describes the projects CARB intends to fund, and sets funding targets and outreach strategies for each project. Each year the Funding Plan is updated and includes funding proposals and

implementation details specific to each FY. Collectively, Clean Transportation Incentives address multiple priorities, including:

- Supporting the state's climate change, air quality, zero-emission vehicle (ZEV) deployment, and petroleum reduction goals.
- Accelerating the transition to zero-emission.
- Supporting priority populations[1] by implementing community-driven clean transportation solutions and equitable investments.
- Supporting economic recovery and workforce training and development.
- Building on successes of previous investments and incorporating lessons learned.

This document is the Proposed Funding Plan for FY 2022-23 (Funding Plan) and contains staff's proposal for expending funds in the 2022 state budget for FY 2022-23 and summarizes stakeholder input received during the public process, including input from priority populations.

The 2022 state budget expands the state's multi-year, multi-agency commitment to decarbonization and includes a total of $6.1 billion over multiple years through FY 2026-27 to accelerate ZEV transportation, with a focus on the communities most impacted by pollution. This proposal builds upon the existing $3.9 billion multi-year commitment to accelerate ZEVs approved in the 2021 budget, for a proposed total investment of $10 billion over multiple years through FY 2026-27 to decarbonize California's most polluting sector and improve public health. This funding will be administered by CARB, the California Energy Commission (CEC), the California State Transportation Agency, and the Governor's Office of Economic and Business Development (Go-Biz). This new funding builds on ZEV and ZEV infrastructure investments made by the State for more than a decade. These investments will focus on an equitable ZEV transition by continuing to find ways to support priority populations.

The Funding Plan covers CARB's portion of the multi-agency ZEV package, a total of $2.6 billion this year appropriated via the Budget Act of 2022 and associated budget trailer bills. This includes $135 million from the General Fund appropriated to CARB in Assembly Bill (AB) 211 (Committee on Budget, Chapter 574, Statutes of 2022), $1.125 billion from the General Fund appropriated to CARB in AB 181 (Committee on Education, Chapter 52, Statutes of 2022), $575 million from the General Fund and $746 million from the Greenhouse Gas Reduction Fund appropriated to CARB in the Budget Act of 2022 as amended by AB 179 (Ting, Chapter 249, Statutes of 2022), and $28.64 million for the Air Quality Improvement Program appropriated to CARB in the Budget Act of 2022 by Senate Bill

[1] As defined Health and Safety Code (HSC) Sections 39711 and 39713.

(SB) 154 (Skinner, Chapter 43, Statutes of 2022). Funding included in the Funding Plan is outlined in Table 1. The sources of funding covered in this document are:

- $381 million for clean transportation equity investments to help increase access to clean transportation and mobility options benefiting low-income and disadvantaged communities and low-income households consistent with the direction provided by SB 1275 and SB 350. This includes $255 million from the General Fund and $126 million in Cap-and-Trade auction proceeds from the Greenhouse Gas Reduction Fund (GGRF) to fund vehicle purchase incentives, clean mobility investments, planning and capacity building.
- $2.2 billion for heavy-duty and off-road equipment projects that support funding for demonstration and pilot projects, vouchers for advanced clean technologies, funding for commercial harbor craft, and financing and support for small fleets transitioning to cleaner technologies. Additionally, funds will be set aside for drayage trucks, transit buses, and school buses, and will also help support incentives for zero-emission off-road equipment, through targeted demonstration and pilot project categories in the off-road sector, and increased funding to the Clean Off-Road Equipment Voucher Incentive Project (CORE). This includes $455 million from the General Fund, $1.125 billion from Proposition 98 General Funds, and $620 million in Cap-and-Trade auction proceeds from GGRF, and $28.64 million for the Air Quality Improvement Program from the Air Quality Improvement Fund.

Complementary infrastructure funding is administered by CEC to support zero-emission drayage, transit, and school bus deployment, as well as funding to support charging infrastructure.

In addition to the money covered in this Funding Plan, CARB will receive another $1.5 billion over the next three years as part of the ZEV package agreed to by the Governor and the Legislature subject to future appropriation. That will allow CARB to expand key efforts and focus– like specific funding earmarked for equitable ZEV mobility and VMT reduction and port electrification – in future Funding Plans.

Furthermore, the Funding Plan also contains a number of suggested changes to existing programs. Most notably, this year, staff is proposing a significant increase to light-duty vehicle purchase incentive amounts for lower-income car buyers based on stakeholder feedback, EV market analysis, and rising costs due to inflation. While these programs have seen record levels of interest, it has been increasingly difficult for approved applicants to find an affordable electric vehicle (EV) given current incentive amounts.

Staff's proposal takes a step towards continued alignment across all three vehicle purchase incentive programs – Clean Vehicle Rebate Project (CVRP), Clean Cars 4 All, and Financing Assistance – and significantly increases the total stacked incentive amounts available across the board for eligible income-qualified car buyers while also focusing dollars in disadvantaged communities. With staff's proposed increases to incentives, eligible car buyers with incomes at or below 300 percent of the federal poverty level would receive $15,000

towards a new battery electric vehicle (BEV) or fuel cell electric vehicle (FCEV), and $12,500 towards a new (PHEV) without scrapping an old vehicle; or between $16,000 to $19,500 towards a new BEV, FCEV, or PHEV when scrapping an old vehicle. In addition to these stacked incentive totals, eligible applicants can receive charging incentives and also choose to go through the Financing Assistance program to obtain low-interest rate loans for the purchase of their vehicle. With staff's proposal to expand CVRP Rebate Now statewide, this provides the opportunity to apply all stacked incentives at the point of purchase. Additional details about this proposal can be found in Chapter 3 and in Appendix C of this Funding Plan.

Finally, staff's proposal also continues to expand the focus on equity within the heavy-duty investments by ensuring investments benefit small businesses and disadvantaged communities. For example, in the Clean Truck and Bus Voucher Incentive Project, known as HVIP, staff introduces a tiered voucher amount system based on fleet size and reserving a significant portion of funding for medium and small fleets across the state, ensuring that fleets that need the most assistance have continued access to HVIP dollars. Staff's proposal also leverages the private capital of the largest fleets in the state and pushes them to significantly increase deployments of zero-emission vehicles in disadvantaged communities. In this proposal, staff recommends expanding the initial investments made in the Innovative Small e-Fleets Pilot, and introduces a new zero-emission truck loan pilot to provide additional support to small fleets as they transition to zero-emission. Finally, CORE and the Advanced Technology Demonstration and Pilot Projects continue to push for transition of off-road equipment to zero-emission including challenging sectors that adversely impact their surrounding communities. Additional details about this proposal can be found in Chapter 4 of this Funding Plan.

The investments contained in the Funding Plan represent only a portion of the substantial investments made by the state to promote clean transportation, support the state's numerous air quality and climate goals, and provide benefits to priority populations. These are complemented by other CARB programs, other state agency programs, local air district programs, as well as actions taken by other local government entities. Each program has its own statutory and policy direction, but collectively, they fit together to support California's multiple public health, air quality, climate change, and equity goals. Staff coordinates regularly with other state agencies and local air districts to ensure these investments are complementary. CARB and CEC are coordinating closely on the implementation of funding to ensure that the vehicle investments proposed in this plan are complemented by supporting infrastructure.

Figure 1: Policy Drivers and Guiding Documents

This Funding Plan continues to support the emission reduction goals identified in the *Climate Change Scoping Plan*, State Implementation Plans, *SB 350 (de León, Chapter 547, Statutes of 2015) Low-Income Barriers Study, Part B: Overcoming Barriers to Clean Transportation Access for Low-Income Residents* (CARB's SB 350 Guidance Document, or Guidance Document), *California Sustainable Freight Action Plan*, the *Mobile Source Strategy*, *Sustainable Communities* consistent with SB 375 (Steinberg, Chapter 728, Statutes of 2008), the *ZEV Action Plan*, and the *ZEV Market Development Strategy*. These incentives provide important early steps to transform the transportation sector, supporting Governor Newsom's Executive Order N-79-20 calling on the state to accelerate the transformation to a zero-emission transportation fleet. The Funding Plan also supports California's overall air

quality and climate goals in reducing emissions in the most impacted communities throughout the state.

The Funding Plan describes CARB's policy drivers and vision for these advanced technology mobile source investments, project funding allocations, proposed revisions to project criteria and other implementation details including project evaluation methods, as well as justification for these investments. The plan also includes more in-depth and comprehensive updates to the SB 1275 (de León, Chapter 530, Statutes of 2014) Three-Year Plan that will encompass all light-duty vehicle purchase incentive and clean mobility investments, the SB 1403 (Lara, Chapter 370, Statutes of 2018) Long-Term Heavy-Duty Investment Strategy and State School Bus Incentive Program Report, and the AB 630 (Cooper, Chapter 636, Statutes of 2017) Annual Performance Goals and Evaluation for the Enhanced Fleet Modernization Program (EFMP) and Clean Cars 4 All programs. Additionally, this year's plan builds upon metrics and evaluation methodologies identified as a part of last year's Funding Plan to address recommendations made by the California State Auditor (CSA).[2]

Staff's Proposal

Staff's proposal is to continue to focus these incentives on accelerating the development and deployment of the cleanest feasible mobile source technologies and improving access to clean transportation. Since their inception, these investments have been used to support the emission reduction goals identified in the Climate Change Scoping Plan, State Implementation Plans, and California Sustainable Freight Action Plan. The projects within Clean Transportation Incentives are designed to support the state's public health, air quality, and climate change goals, and, as emphasized in Governor Newsom's Executive Order N-79-20, to support the transformation of California's vehicle and equipment fleet to one that is zero emitting where feasible. In designing these investments, CARB strives to maximize the benefits for priority populations, and these investments include targeted support to the communities most impacted by poor air quality.

In most cases, these projects continue to build on investments from previous budget cycles that were envisioned as multi-year investments, while taking steps to continue shifting from broad purchase incentives to more targeted incentives for those who need them most. CARB anticipates this shift will continue to increase in the coming years. Staff developed the proposed project allocations through a public process, considering legislative direction and feedback from stakeholders and communities, and by evaluating anticipated demand and technology readiness, and reviewing the long-term planning elements of previous funding plans.

The Heavy-Duty Investment Strategy and the Three-Year Plan for CVRP, EV Market, Clean Transportation Equity Investments, and Outreach played key roles in this assessment. Staff

[2] California State Auditor. California Air Resources Board: Improved Program Measurement Would Help California Work More Strategically to Meet Its Climate Change Goals. February 2021. http://auditor.ca.gov/pdfs/reports/2020-114.pdf

also considered which projects have remaining funds allocated in previous FYs, as well as other available funding sources. Staff's proposed project category allocations are shown in Table 1.

Of the funding allocated for Low Carbon Transportation from GGRF, only $20 million is specifically appropriated to particular projects in the State Budget. $126 million is appropriated for light-duty equity projects, including purchase incentives and mobility, and $620 million is appropriated to heavy-duty projects, with $20 million specifically appropriated for commercial harbor craft. This means that the Board has the discretion to allocate $126 million within the light-duty equity projects and $600 million within the heavy-duty projects.

For the General Fund allocations, the majority of the funding was specifically appropriated in the Budget to specific projects, including:

- $125 million to establish the Statewide Clean Cars 4 All program,
- $80 million for air district Clean Cars 4 All programs,
- $10 million to support the Zero-Emission Assurance Project (ZAP),
- $70 million for zero-emission transit buses,
- $135 million for zero-emission school buses through HVIP.
- $157 million for zero-emission drayage trucks, and
- $40 million for commercial harbor craft.

Funding from the General Fund that remains for Board action includes $40 million for light-duty equity projects only.

Table 1: Proposed Project Category Allocations (millions)

Project Category	GGRF	General Fund	Prop 98 General Fund	Air Quality Improvement Fund
Clean Transportation Equity Programs Established Under SB 1275	-	-	-	-
Vehicle Purchase Incentive Programs • *≥$125 for Statewide Clean Cars 4 All* • *≥$80 for Air District Clean Cars 4 All* • *≥$10 for ZAP*	$111	$215	-	-
Clean Mobility Investments	$15	$40	-	-
Heavy-Duty Vehicles and Off-Road Equipment	-	-	-	-
Zero-Emission Drayage Trucks, School/Transit Buses • *All this Funding is Prescribed in Budget*	-	$362	$1,125	-
Clean Trucks, Buses, and Off-Road Freight	$578	-	-	-
Demonstration and Pilot Projects (Advanced Technology and Commercial Harbor Craft) • *$60 for Commercial Harbor Craft*	$42	$93	-	-
AQIP	-	-	-	$28.64
	TOTAL	**$2,610**		

The Funding Plan summarizes staff's proposal for expending funds and reflects input from public workshops held between March and September 2022, public work group meetings held between April and September 2022, program specific Focus Groups from April through July 2022, and one-on-one meetings with stakeholders, including priority populations, targeted surveys, and additional stakeholder comments. The document describes staff's proposal with respect to:

- CARB priorities for this year's funding cycle.
- Funding allocations for each project category.
- Program refinements based on public input and CARB evaluation of recent years' projects.
- Enhanced metrics and program evaluation strategies to measure the behavioral changes and socioeconomic benefits generated by projects.
- Contingency provisions should mid-year refinements be necessary.

The investments recommended in the Funding Plan represent Clean Transportation Incentives, which is only a portion of the substantial investments made by the state to promote clean transportation, support the state's numerous air quality and climate goals, and provide benefits to priority populations. CARB's portfolio of incentive programs outside of the Funding Plan include the Community Air Protection Program (AB 617), the Funding Agricultural Replacement Measures for Emission Reductions Program (FARMER), the Carl Moyer Program, and the Volkswagen (VW) Mitigation Trust.

California Environmental Quality Act (CEQA) Requirements

CARB has determined that the proposed FY 2022-23 Funding Plan is not a project subject to, or is otherwise exempt from, the requirements of the CEQA. CARB's certified regulatory program, which applies to the adoption, approval, amendment, or repeal of standards, rules, regulations, or plans for the protection and enhancement of the state's ambient air quality, has been certified by the California Secretary for Natural Resources under Public Resources Code section 21080.5 of CEQA. (California Code of Regulations (Cal. Code Regs.), tit. 14, § 15251, subd. (d).) Public agencies with certified regulatory programs are exempt from certain CEQA requirements, including but not limited to, preparing environmental impact reports, negative declarations, and initial studies. For activities that constitute project approvals, as those terms are used in CEQA, CARB, as a lead agency, prepares a substitute environmental document (referred to as an "Environmental Analysis" or "EA") as part of the Staff Report prepared for a proposed action to comply with CEQA. (Cal. Code Regs., tit. 17, §§ 60000-60008.)

CARB, as the lead agency under CEQA, has reviewed the proposed FY 2022-23 Funding Plan and concluded that it is not a "project" under CEQA, as that term is defined under the California Code of Regulations (CCR), title 14, section 15378(b)(4), and thus is not subject to CEQA review. Section 15378(b)(4) states: "[t]he creation of government funding mechanisms

or other government fiscal activities which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment" is not a "project" subject to CEQA review. The proposed FY 2022-23 Funding Plan is a governmental fiscal activity that does not involve any commitment to any specific projects that may result in potentially significant impacts on the environment. The FY 2022-23 Funding Plan includes multiple funding objectives to assist several entities and individuals to incentivize the transition to lower emitting transportation options through programs such as HVIP, CVRP, and Clean Cars 4 All; these programs provide rebates or vouchers to support the purchase of cleaner vehicles on a first-come, first-served basis. The FY 2022-23 Funding Plan proposes budgetary allocations for these projects over the next FY.

Even if the FY 2022-23 Funding Plan were a project under CEQA, it would be exempt from CEQA. First, the FY 2022-23 Funding Plan would be categorically exempt from CEQA under the commonsense exemption. (Cal. Code Regs., tit. 14, § 15061, subd. (b)(3).) CEQA Guidelines state "[t]he activity is covered by the common sense exemption that CEQA applies only to projects, which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA." (Cal. Code Regs., tit. 14, § 15601, subd. (b)(3).) Second, the FY 2022-23 Funding Plan would be exempt from CEQA under the "Class 8" exemption for its protection of the environment. (Cal. Code Regs., tit. 14, § 15308.)

The FY 2022-23 Funding Plan is exempt from CEQA under the common sense because the Plan has no reasonably foreseeable potential for causing a significant adverse impact on the environment; indeed, the Plan's overall goal and effect is to facilitate cleaner air. As mentioned above, the FY 2022-23 Funding Plan proposes budgetary allocations to CARB's clean transportation incentives including clean vehicle rebate and voucher programs. The Plan does not commit CARB to any particular project, and project applications will be evaluated on a case-by-case basis pursuant to their respective program guidelines. Thus, based on CARB's review, it can be seen with certainty that there is no possibility that the proposed FY 2022-23 Funding Plan may result in a significant adverse impact on the environment.

Similarly, the FY 2022-23 Funding Plan is also exempt from CEQA under the Class 8 exemption because the Funding Plan's overall goal and effect is to improve air quality. As mentioned above, the FY 2022-23 Funding Plan proposes budgetary allocations to CARB's clean transportation incentives and does not commit CARB to any specific project. The programs or projects that may receive funding under the FY 2022-23 Funding Plan would be aimed at incentivizing further ZEVs and low-emission vehicles and off-road equipment within California, particularly to consumers in lower income or disadvantaged communities, which are disproportionally burdened with air pollution. These new ZEVs and low-emission vehicles and off-road equipment will be replacing older, more-polluting vehicles or equipment, which will have a beneficial impact on the air quality. CARB found no substantial evidence indicating the proposal could adversely affect air quality or any other environmental resource area, or that any of the exceptions to the Class 8 exemption applies (Cal. Code Regs., tit. 14, § 15300.2).

Therefore, even if the FY 2022-23 Funding Plan were a project under CEQA, it would be exempt from CEQA.

Chapter 1: Introduction and Background

CARB's portfolio of incentive programs complements regulatory programs to reduce emissions and increase access to clean transportation. Each incentive program comes with its own requirements, emission reduction goals, and project eligibility criteria making the portfolio diverse and far reaching. Together, the entire portfolio addresses multiple goals, including:

- Turning over legacy combustion fleets to achieve cost-effective, near-term emission reductions in support of State Implementation Plans, air toxics reduction goals, and community air protection goals.
- Accelerating the introduction and deployment of zero-emission technologies to meet California's air quality and climate change goals.
- Improving access to and investing in clean transportation and mobility options for priority populations most impacted by pollution in support of equity and environmental justice goals.[3]
- Supporting small owner/operator fleets' transition to zero-emission in support of equitable investment goals.
- Supporting the transition to and adoption of more sustainable transportation modes to reduce vehicle miles traveled (VMT) and greenhouse gas (GHG) emissions to support sustainable communities.
- Expanding the supply chain for advanced technology components, the number of manufacturers choosing California as a home for manufacturing and leveraging private partnerships and investment to support the commercial viability of advanced technologies.
- Supporting economic recovery and growth to continue the momentum California has built towards becoming a hub for the manufacture and deployment of clean technologies, training and career pathways, supporting associated green jobs, as well as high-road jobs that provide sustainable wages and benefits, opportunities for advancement, and safe working conditions.

The large-scale statewide investments CARB makes through Clean Transportation Incentives sends a market signal and moves the needle to advance the commercialization of clean technologies. These investments have been instrumental to California leading the nation in ZEV deployment, and in developing equity-focused programs that bring clean transportation and mobility options to priority populations. The state is seeing the economic benefit of

[3] Building on earlier commitments, in Resolution 22-12 (Aug. 25, 2022), the Board directed staff to embark on continuing efforts to support adoption of ZEVs in underserved communities, including via incentive programs. The priorities in this Funding Plan reflect and partially respond to the ongoing commitments in that Resolution.

these investments as ZEVs and their components represent the largest source of California exports, and in turn supporting jobs in a burgeoning industry for thousands of Californians.[4]

These investments also leverage significant sources of other public and private funding, further stimulating the economy. Many projects such as the heavy-duty demonstration and pilot projects or the clean mobility investment projects see state investments matched by other public or private sources. Purchase incentives such as Clean Cars 4 All, HVIP, and CORE encourage consumer and business spending within the state. The dollars invested in Clean Transportation Incentives effectively work as a multiplier—catalyzing far greater spending that supports both California's economy and its climate change, equity, and air quality goals.

The Funding Plan's focus on deploying zero-emission mobile source technologies wherever possible is an important aspect of the state's climate change and air quality investment portfolio. The investment strategy is also coordinated with and complemented by other state agencies' clean transportation and sustainable community, clean energy, and natural resources programs funded with Cap-and-Trade auction proceeds and other funding sources. All these programs are designed to help achieve one or more of the state's ambitious goals to reduce GHGs and short-lived climate pollutant emissions, improve air quality and reduce toxics risk, deploy ZEVs, reduce VMT, and lessen petroleum dependency.

Funding Plan Goals & Priorities

CARB's Draft 2022 *Climate Change Scoping Plan Update* and *2020 Mobile Source Strategy* conclude that a transition to zero-emission technologies and use of the cleanest, lowest carbon fuels and energy across all vehicle and equipment categories is needed to meet GHG, smog-forming, and toxic pollutant emission reduction goals.[5,6] The *2016 California Sustainable Freight Action Plan* identified the need for this transition as it relates to the freight sector.[7] In addition, AB 617 (C. Garcia, Chapter 136, Statutes of 2017) establishes goals for reducing emissions of toxic air contaminants and criteria air pollutants in communities affected by a high cumulative exposure burden. Moreover, the Draft Scoping Plan and *Draft 2022 Progress Report on California's Sustainable Communities and Climate Protection Act* (SB 150 Progress Report) point to the need for adopting alternative modes of transportation wherever possible, including in priority populations.[8,9]

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[4] "California Leads the Nation's ZEV Market, Surpassing 1 Million Electric Vehicles Sold". Office of Governor Gavin Newsom. February 25, 2022. https://www.gov.ca.gov/2022/02/25/california-leads-the-nations-zev-market-surpassing-1-million-electric-vehicles-sold/

[5] California Air Resources Board. *California's 2022 Draft Scoping Plan Update.* May 2022. https://ww2.arb.ca.gov/sites/default/files/2022-05/2022-draft-sp.pdf

[6] California Air Resources Board. *Mobile Source Strategy*. October 2021. https://ww2.arb.ca.gov/sites/default/files/2021-12/2020_Mobile_Source_Strategy.pdf

[7] California Air Resources Board. *California Sustainable Freight Action Plan.* July 2016. https://ww2.arb.ca.gov/sites/default/files/2019-10/CSFAP_FINAL_07272016.pdf

[8] California Air Resources Board. *Draft 2022 Progress Report: California's Sustainable Communities and Climate Protection Act.* June 2022. https://ww2.arb.ca.gov/sites/default/files/2022-06/2022_SB_150_Main_Report_Draft_1.pdf

[9] California Air Resources Board. *California's 2022 Draft Scoping Plan Update. May 2022.* https://ww2.arb.ca.gov/sites/default/files/2022-05/2022-draft-sp.pdf

The clean air mandates, goals, and priorities driving the investments included in this Funding Plan document include:

- Accelerating the introduction and deployment of zero-emission technologies to meet California's longer-term air quality, carbon neutrality, petroleum reduction, and climate change goals including that 100 percent of sales of new passenger vehicles and trucks in the state be zero-emission by 2035, all drayage trucks be zero-emission by 2035, off-road vehicles and equipment be zero-emission by 2035 where feasible, and all other vehicles in the medium- and heavy-duty fleet transition to zero-emission by 2045 as described in Governor Newsom's Executive Order N-79-20[10].
- Incorporating equity principles and implementing the recommendations from CARB's SB 350 study, *Overcoming Barriers to Clean Transportation Access to Low-Income Residents* (CARB's SB 350 Guidance Document or Guidance Document).[11]
- Reducing emissions of toxic air contaminants and criteria air pollutants in communities affected by a high cumulative exposure burden consistent with AB 617 goals.
- Ensuring that the state's overall Cap-and-Trade auction proceeds investments meet or exceed the disadvantaged community, low-income community, and low-income household targets established in AB 1550 (Gomez, Chapter 369, Statutes of 2016) and maximizing the benefits to these communities and households as required by the 2018 *Funding Guidelines for Agencies that Administer California Climate Investments.*[12]
- Supporting the Sustainable Communities Strategies consistent with SB 375 (Steinberg, Chapter 728, Statutes of 2008); exploring ways to take actions required to reduce VMT while also increasing access to clean transportation options and critical goods and services consistent with the SB 150 Progress Report.
- Reducing GHG emissions to 40 percent below 1990 levels by 2030 consistent with SB 32 (Pavley, Chapter 249, Statutes of 2016).
- Meeting the federal health-based ambient air quality standards for ozone and fine particulate matter.[13]

[10] Executive Order N-79-20 https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf
[11] California Air Resources Board. *Low-Income Barriers Study, Part B: Overcoming Barriers to Clean Transportation Access for Low-Income Residents*. February 2018. https://ww2.arb.ca.gov/sites/default/files/2018-08/sb350_final_guidance_document_022118.pdf
[12] California Air Resources Board. *Funding Guidelines for Agencies that Administer California Climate Investments*. August 2018. https://ww2.arb.ca.gov/sites/default/files/classic//cc/capandtrade/auctionproceeds/2018-funding-guidelines.pdf?_ga=2.114423111.1931706691.1624309565-1297275244.1567180558
[13] California Air Resources Board. Mobile Source Strategy. October 21, 2021. https://ww2.arb.ca.gov/sites/default/files/2021-12/2020_Mobile_Source_Strategy.pdf

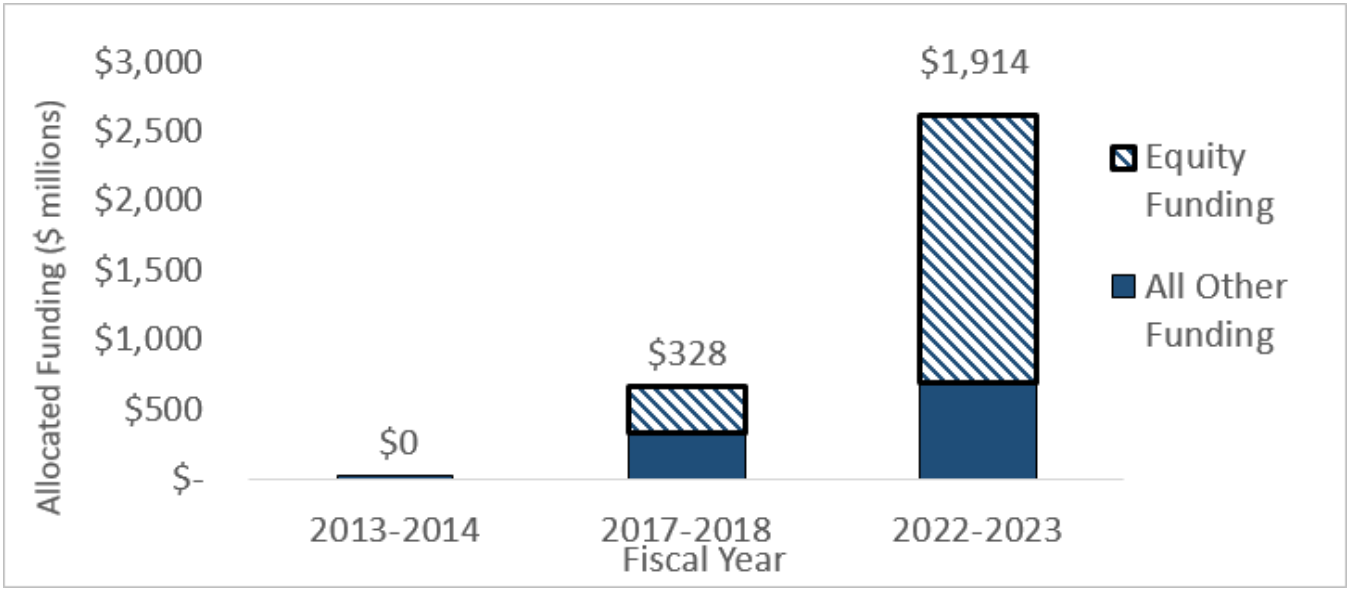
- Reducing emissions of methane and black carbon to 40 percent and 50 percent, respectively, below 2013 levels by 2030 as called for in CARB's 2017 *Short Lived Climate Pollutant Reduction Strategy.*[14]
- Following and incorporating goals and priorities from relevant legislation and striving to exceed these goals wherever possible. Some of the key bills guiding the Funding Plan in addition to the ones listed above include SB 1275 (De León, Chapter 530, Statutes of 2014), SB 1204 (Lara, Chapter 524, Statutes of 2014), SB 350 (De León, Chapter 547, Statutes of 2015), SB 1403 (Lara, Chapter 370, Statutes of 2018), AB 2285 (Committee on Transportation, Chapter 100, Statutes of 2020), AB 841 (Ting, Chapter 372, Statutes of 2020), AB 794 (Carrillo, Chapter 748, Statutes of 2021), and SB 372 (Leyva, Chapter 639, Statutes of 2021).
- Continuing to address recommendations made in February 2021 by the State Auditor in *California Air Resources Board: Improved Program Measurement Would Help California Work More Strategically to Meet Its Climate Change Goals* (CARB Audit Report).[15]

Intentional Benefits to Communities

Priority populations continue to experience disproportionately high levels of air pollution and the resulting detrimental impacts to their health. To address these inequities, equity must be at the forefront of program design, and programs must deliver intentional benefits. As Low Carbon Transportation projects have evolved, staff has placed increasing focus on targeting the benefits to those who need them most. Figure 2 illustrates how funding priorities have evolved over the last decade and has increasingly focused on priority populations. In FY 2013-14 there were no funds allocated to CARB to specifically benefit priority populations. In FY 2017-2018, approximately 50 percent of funding was allocated to benefit priority populations and in the current FY, staff estimate over 70 percent of $2.61 billion expected to benefit priority populations.

[14] California Air Resources Board. *Short-Lived Climate Pollutant Reduction Strategy.* March 2017. https://ww2.arb.ca.gov/sites/default/files/2020-07/final_SLCP_strategy.pdf
[15] California State Auditor. California Air Resources Board: Improved Program Measurement Would Help California Work More Strategically to Meet Its Climate Change Goals. February 2021. http://auditor.ca.gov/pdfs/reports/2020-114.pdf

Figure 2: Glimpse of Investments In and Benefitting Priority Populations Over the Years



While progress has been made, staff recognizes that there are areas where further program refinements and better communication and outreach would result in improved benefits to all Californians, especially priority populations. In particular, as a part of this years' Funding Plan development, staff heard from African American communities and tribal governments that in the past meaningful outreach has not occurred in their communities, and because of this, they have not had the same opportunities as others to benefit from these incentives. Staff is continuing to work with CARB program administrators and community leaders to identify funding opportunities and outreach strategies to ensure communities are involved in the decision-making process for investments and have equitable access to funding. Additional details on these efforts can be found in the Funding Plan Development Process, Outreach, & Community Engagement section and within each project section.

Program Evaluation & Reporting

Since the inception of AQIP in 2007 with the passage of AB 118 (Nunez, Chapter 750, Statutes of 2007), and subsequent addition of Low Carbon Transportation Investments appropriated by the Legislature beginning in 2013, CARB staff has continually evaluated the various programs through a range of avenues including, but not limited to, receiving feedback from program administrators, consumers and communities, and by utilizing program data collected through surveys, telematics, and other evaluation tools. In addition, CARB has funded research contracts with universities to analyze several specific projects. Staff have also worked with stakeholders that have unique experience understanding priority populations, applying equity principles, and ensuring investments are meeting community needs, and CARB has met directly with communities that have received funding to understand how programs are or are not working to meet program goals.

With the substantial increase in funding in recent years, there is increased emphasis on program evaluation and using lessons learned from those evaluations when making funding

and design recommendations to improve programs. In the CARB Audit Report, the State Auditor recommended that CARB could do more to measure the GHG emissions reductions of programs that primarily provide socioeconomic benefits. CARB staff continues to work with stakeholders, including those in academia, grantees, environmental organizations, community-based organizations (CBO), community member led grassroots organizations, and local communities and residents, to close the gaps highlighted in the report.

As part of the Funding Plan, staff continue to refine metrics and strategies to evaluate project effectiveness, as recommended in the CARB Audit Report. These evaluation enhancements look beyond long-standing metrics, such as emission reductions, and focus on measuring behavioral changes and socioeconomic benefits that result from clean transportation incentive projects.

For consumer-focused incentives projects, understanding how effective a project is at contributing to behavioral changes could allow CARB to make further project refinements. Participant surveys are the most common method of collecting behavioral impact data, and surveys typically fall under three general types: initial/sign-up surveys, post-trip surveys, and user surveys.

While many projects already conduct surveys of participants to better understand what role a project played in vehicle purchasing decisions, staff is currently building upon these efforts to create streamlined surveys in partnership with internal and external researchers. Additional evaluation tools that are used across CARB's clean mobility equity projects include vehicle telematics data, reporting activities and outcomes by project grantees, and evaluations of project effectiveness. CARB continues to refine data collection, analysis, and reporting of its projects and will provide more detail on specific methods used within each project chapter below.

Further, CARB contracted with the University of California (UC) Berkeley's Transportation and Sustainability Research Center to develop evaluation models/processes for CARB to use as a new standard for assessing the effectiveness, sustainability, and outcomes of several of CARB's clean mobility equity pilot projects for priority populations. This research study uses a hypothesis-based approach to evaluate existing CARB-funded clean mobility projects and will conclude with a summary of lessons learned and policy recommendations for CARB's consideration when implementing current and future clean mobility projects.

While all projects are designed to address multiple goals, including emission reductions, a primary goal of several projects is to provide socioeconomic benefits to all Californians, including priority populations. For each of these projects, staff proposed strategies and metrics to evaluate the socioeconomic benefits resulting from each project as a part of last

year's Funding Plan. Staff identified the following clean transportation projects as providing socioeconomic benefits in this focused way:

- Clean Cars 4 All.
- Financing Assistance for Lower-Income Consumers (Financing Assistance).
- Clean Mobility Options (CMO) Projects.
- Electric Bicycle Incentive Project.
- Agricultural Worker Vanpool Pilot Project[16].
- Clean Mobility in Schools (CMiS).
- Sustainable Transportation Equity Project (STEP).

Greater detail on staff's updated evaluation methods and metrics for each project is included in chapters 3 and 4 of the Funding Plan.

In addition to program evaluation, CARB also reports regularly on how our investments and programs are progressing. Progress reports are provided in the form of formal documents and publicly available tools that display program data including the:

- Annual Report to the Legislature on California Climate Investments Using Cap-and-Trade Auction Proceeds[17].
- Biennial Report to the Legislature on the AB 118 AQIP[18].
- SB 1204 Requirements and Performance Criteria Evaluation for Heavy-Duty Projects[19].
- SB 1403 State School Bus Incentive Programs Report[20].
- AB 630 Annual Performance Goals and Evaluation for EFMP and Clean Cars 4 All[21].

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[16] CARB has paused funding for the agricultural workers vanpools while we evaluate technologies on the market that meet the specifications required for the project. CARB will develop metrics and evaluations strategies for the agricultural workers vanpool at such time that the project receives additional funds.
[17] California Air Resources Board. *Annual Report to the Legislature on California Climate Investments Using Cap-and-Trade Auction Proceeds*. https://www.caclimateinvestments.ca.gov/annual-report. April 2022.
[18] California Air Resources Board. *Biennial Report to the Legislature on the AB 118 Air Quality Improvement Program*. https://ww2.arb.ca.gov/resources/documents/2020-biennial-report-legislature-ab-118-air-quality-improvement-program-fiscal. April 2021.
[19] California Air Resources Board. *SB 1204 Requirements and Performance Criteria Evaluation for Heavy-Duty Projects*. https://ww2.arb.ca.gov/sites/default/files/2021-10/fy21-22_fundingplan_appendix_b.pdf. October 2021.
[20] California Air Resources Board. *SB 1403 State School Bus Incentive Programs Report*. https://ww2.arb.ca.gov/sites/default/files/2021-10/fy21-22_fundingplan_appendix_e.pdf. October 2021.
[21] California Air Resources Board. *Annual Performance Goals and Evaluation for the Enhanced Fleet Modernization Program and Clean Cars 4 All*. https://ww2.arb.ca.gov/annual-performance-goals-efmp-cc4a. Fiscal Year 2020/2021.

- CVRP Rebate Dashboards[22].
- HVIP Voucher Map[23].
- CORE Voucher Funding Map[24]
- CMO Mobility Project Awardees[25] and Needs Assessment Awardees[26].
- Clean Vehicle Assistance (CVA) Program Learnings & Data Transparency[27].

Staff continues to refine metrics for success for each funded project; collect expanded project data, including data on race, ethnicity, gender identity, socioeconomic status, and other demographic data through program applications and surveys; analyze data as appropriate to better understand who is benefiting from investments and how funds support the state's equity goals. Staff plans to use this information to enhance program data tools and improve how outcomes are reported from Low Carbon Transportation investments and to support goals outlined in the Cap-and-Trade Auction Proceeds Fourth Investment Plan[28].

Low Carbon Transportation & the ZEV Package

Over the last two budget cycles, the Governor and the Legislature agreed to a multi-year, multi-agency $10 billion ZEV incentive package to equitably decarbonize the transportation sector and improve public health The package includes market-changing investments—ranging from cleaning up drayage trucks, transit, and school buses to accelerating equitable electrification of passenger vehicles, e-bikes, and rail—coupled with infrastructure and incentives for in-state manufacturing. The funding will be administered by CARB, CEC, the California State Transportation Agency, and Go-Biz. CARB was appropriated a total of $2.6 billion this year as part of the ZEV package, building on the $1.5 billion CARB received in last year's budget, and the ZEV package includes a commitment for additional funding in future years.

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[22] Center for Sustainable Energy. *California Air Resources Board Clean Vehicle Rebate Project, Rebate Statistics.* https://cleanvehiclerebate.org/en/rebate-statistics.
[23] CALSTART. *California Air Resources Board Clean Truck and Bus Vouchers, HVIP Voucher Map.* https://californiahvip.org/impact/#deployed-vehicle-mapping-tool.
[24] CALSTART. *California Air Resources Board Clean Off-Road Equipment Voucher Incentive Project, CORE Voucher Funding Map.* https://californiacore.org/voucher-funding-map/.
[25] CALSTART. *California Air Resources Board Clean Mobility Options Project, CMO Project Awardees.* https://www.cleanmobilityoptions.org/mp-awardees/. 2020.
[26] CALSTART. *California Air Resources Board Clean Mobility Options Project, CMO Project Awardees.* https://www.cleanmobilityoptions.org/na-awardees/. 2020.
[27] Beneficial State Foundation. *California Air Resources Board Clean Vehicle Assistance Project, Program Learnings & Data Transparency.* https://cleanvehiclegrants.org/program-data/.
[28] California Air Resources Board. *Cap-and-Trade Auction Proceeds Fourth Investment Plan.* https://ww2.arb.ca.gov/sites/default/files/auction-proceeds/Cap-and-Trade%20Auction%20Proceeds%20Fourth%20Investment%20Plan_FINAL.pdf. November 2021.

This Funding Plan has been developed with stakeholders, including priority populations, and staff will continue to collect written comments to be considered at the November 2022 Board Hearing through CARB's online public comment portal.

Cap-and-Trade auction proceeds provide funding for CARB's advanced technology, clean transportation incentive programs that reduce GHG emissions. Low Carbon Transportation is identified as a priority investment area in the first 4 Cap-and-Trade Auction Proceeds Investment Plans. These investments accelerate the transition to low carbon freight and passenger transportation. This year's Low Carbon Transportation appropriation of $746 million is being augmented by an additional $710 million from the General Fund, $1.125 billion from Proposition 98 General Funds, and $28.64 million from the Air Quality Improvement Fund. This additional funding is described below.

Low Carbon Transportation

Between 2013 and 2021, the Legislature appropriated a total of $3.7 billion to CARB for the types of Low Carbon Transportation investments covered in this Funding Plan, and the Legislature appropriated an additional $2.6 billion this year bringing the total investment over the last decade to over $6 billion. These appropriations are being used to fund: zero-emission and plug-in hybrid passenger vehicles through traditional and innovative car ownership projects such as CVRP, Clean Cars 4 All, and Statewide Financing Assistance; clean mobility investments to support sustainable communities by decreasing VMT while increasing access to alternative modes of transportation in and near priority populations and for lower income Californians; deployment of incentives for clean trucks, buses, and off-road equipment utilizing zero-emission technologies; and advanced technology demonstration and pilot projects.

As reported in the California Climate Investments 2022 Mid-Year Data Update[29], 58 percent of CARB's Low Carbon Transportation investments from GGRF has been allocated to projects benefiting priority populations as shown in Table 2 below exceeding the commitments made in past Funding Plans. Much of the funding benefiting priority populations is from clean transportation equity projects, Zero-Emission Truck and Bus Pilot Projects, and Advanced Technology Demonstration Projects. While not limited to priority populations, over 60 percent of HVIP funding has been awarded to trucks and buses benefiting priority populations. A significant portion of the heavy-duty investments have also been directed to small and medium fleets. Since 2021, about 27 percent of HVIP vouchers have been requested by fleets with 50 or fewer heavy-duty vehicles based in California. These small fleets make up the vast majority of the California trucking fleet population—of the fleets that operate Class 4-8 trucks in California, approximately 99 percent run fewer than 50 trucks.[30] This represents a significant increase in the number of small fleets purchasing zero-emission vehicles, and staff expects that demand among these smaller fleets will continue to grow.

[29] California Air Resources Board. California Climate Investments 2022 Mid-Year Data Update. May 31, 2022. https://ww2.arb.ca.gov/sites/default/files/auction-proceeds/cci_2022_mydu_cumulativeoutcomes.pdf
[30]2019 Department of Motor Vehicles (DMV) Data.

Table 2: Low Carbon Transportation Project Allocations Benefiting Priority Populations to Date[a]

Project	Funding Allocated (millions)	Share Benefiting Priority Populations
Clean Transportation Equity and Light-Duty Investments		
CVRP	$995.1[b]	33%
Clean Cars 4 All	$177[b]	97%
CMO	$55.2	100%
Financing Assistance	$41.9[b]	85%
Agricultural Worker Vanpools	$6	100%
CMiS Pilot Project	$34.6	100%
Rural School Bus Pilot Project	$61.6	52%
STEP	$44.5	100%
Outreach, Education, and Awareness	$10[b]	100%
Heavy-Duty Vehicle and Off-Road Equipment Investments		
Advanced Technology Demonstrations and Pilot Projects	$117.2	100%
CORE	$44.2[b]	83%
Zero-Emission Truck and Bus Pilots	$85	78%
Zero- and Near Zero-Emission Freight Facilities	$148.7	100%
HVIP	$486.4[b]	60%
Total	**$2,272.4**	**58%**

[a] *Source: California Climate Investments 2022 Mid-Year Data Update.*

[b] *Funding shown here only includes Low Carbon Transportation Allocations. CVRP and HVIP received funding from the General Fund and AQIP as shown in Tables 3 and 4. Clean Cars 4 All received funding from AQIP (as shown in Table 4) and $10 million from the VW settlement funds. Financing Assistance received $10 million from the VW settlement funds, and Access Clean California also received $5 million from the VW settlement funds. CORE received a one-time allocation of $86.45 million from the Air Pollution Control Fund as shown in Table 3.*

General Fund

In FY 2021-22, the Legislature appropriated $838 million from the General Fund to the Low Carbon Transportation program to augment funds appropriated from Cap-and-Trade auction proceeds. This funding was allocated to CVRP, the Electric Bicycles Incentive Project, HVIP, CORE (including small off-road equipment), and the Zero-Emission Drayage Truck and

Infrastructure Pilot Project as shown in Table 2. For FY 2022-23, the Budget Act of 2022 and associated budget trailer bills provides CARB a total of $710 million to support clean transportation equity programs established under SB 1275, zero-emission drayage trucks, school buses, transit buses, commercial harbor craft, and demonstration and pilot projects in the zero-emission heavy-duty sector.

Additionally, AB 181, the education omnibus budget trailer bill, provided CARB with $1.125 billion to administer grants to help local educational agencies replace internal combustion school buses. An additional $375 million was provided to CEC for complementary grants for supporting infrastructure. Grants will be awarded over the course of 5 FYs, beginning in FY 2023-24. These funds will be provided directly to local educational agencies and will help protect children from harmful air pollution by accelerating the transition of the state's school bus fleet to zero-emission or renewable fuel technology.

Air Pollution Control Fund

The Air Pollution Control Fund is used to put penalties and fees collected from polluters to work improving air quality in the state. In FY 2021-22, the state budget included a one-time appropriation of $86.45 million from the Air Pollution Control Fund to support clean trucks, buses, and off-road equipment. Specifically, the Air Pollution Control Fund dollars included in the 2021 ZEV Package originate from enforcement settlements with Fiat Chrysler and Mercedes Benz (Daimler) and was allocated to the CORE program as shown in Table 3.

Table 3: General Fund and Air Pollution Control Funds to Date (millions)

Low Carbon Transportation Project	General Fund	Air Pollution Control Fund
CVRP	$415	-
Electric Bicycle Incentives Project	$10	-
HVIP	$373	-
CORE*	-	$86.45
Drayage Truck and Infrastructure Pilot	$40	-
TOTAL	**$838**	**$86.45**

*In FY 2021-22 CORE was also allocated an additional $30 million from GGRF to provide incentives for professional landscaping services in California operated by small businesses or sole proprietors to purchase zero-emission small off-road equipment.

Air Quality Improvement Program (AQIP)

AQIP is a mobile source incentive program that focuses on reducing criteria pollutant and diesel particulate emissions with concurrent reductions in GHG emissions. Funding for AQIP comes primarily from the smog abatement fee assessed annually by the California

Department of Motor Vehicles (DMV) during a vehicle's first six registration years in lieu of a biennial smog inspection. This year, the program has a budget of $28.64 million.

AQIP was created in 2007 by AB 118. Subsequently, AB 8 (Perea, Chapter 401, Statutes of 2013) reauthorized the fees that support AQIP through 2023. AB 8 also requires CARB to provide preference to projects with higher benefit-cost scores when considering projects for AQIP funding. A detailed discussion of the benefit-cost analysis and selection process for AQIP projects is provided in Appendix A of this Funding Plan.

Initially, AQIP had provided funding for the Providing Loan Assistance for California Equipment program for the first year, which later became the Truck Loan Assistance Program. CVRP, HVIP, and demonstrations for advanced emission reduction vehicle technologies were funded though AQIP thereafter, and in recent years these projects have been primarily funded from the Low Carbon Transportation appropriations because demand has exceeded AQIP's budget. Since 2014-15, the majority of AQIP funds have been directed to the Truck Loan Assistance Program, which helps small business truckers on the margins and at most risk for lending to secure financing for newer trucks in advance of compliance deadlines for CARB's In-Use Truck and Bus Regulation.

Table 3 provides a summary of AQIP investments to date including one-time funding provided in various years to help meet demand. In some years, CVRP and HVIP received funding from both AQIP and Low Carbon Transportation.

Table 3: AQIP Project Allocations to Date[1]
(FY 2008-09 through FY 2021-22)

AQIP Project	Cumulative Project Allocations (millions)
Truck Loan Assistance Program	**$244**[2]
CVRP	**$146**[2,3]
HVIP	**$89**[2,3]
Clean Cars 4 All	**$4**[4]
Natural Gas Engine Incentives	**$10**
Agricultural Equipment Trade Up in San Joaquin Valley	**$4**
Advanced Technology Demonstration/Vehicle Testing	**$6**
Lawn and Garden Equipment Replacement	**$3**
Truck Filter Replacements	**$3**
Off-Road Hybrid Equipment Pilot	**$2**
Zero-Emission Agricultural Utility Equipment	**$0.1**
TOTAL	**$511**
Air Quality Improvement Fund	$403
Other funding sources[1]	$108

[1]Projects rounded to nearest $ million, except for projects allocated less than $2 million. Totals may not sum due to rounding.
[2]Includes a total of $108 million in funding from CEC's Clean Transportation Programs and the Vehicle Inspection and Repair Fund and CARB's 2017-18 budget. Truck Loan Assistance received $25 million, CVRP received $79 million, and HVIP received $4 million of these other funds.
[3]CVRP and HVIP also received Low Carbon Transportation funds in FY 2013-14 through 2019-20 and General Funds in FY 2021-22.
[4]Clean Cars 4 All was initially allocated $3 million in the FY 2020-21 Funding Plan and was later allocated the $0.64 million reserve.

Additional Legislation Guiding Funding Plan Development & Implementation

Several bills passed by the Legislature in recent years provide further guidance to CARB on these programs and specify requirements for the Funding Plan.

SB 1275 (de León, Chapter 530, Statutes of 2014) guides CARB's light-duty vehicle and equity investments. SB 1275 establishes the Charge Ahead California Initiative to increase the number of zero-emission and near zero-emission vehicles on California's roads and to

increase access to these vehicles for lower-income Californians and priority populations. It also identifies the Cap-and-Trade auction proceeds as a funding source that could be utilized to meet the provisions established in the Charge Ahead California Initiative. SB 1275 establishes requirements for how CARB implements CVRP and also requires that CARB establish programs such as car sharing, financing assistance, and enhancements to the EFMP Plus-Up Pilot Project scrap and replace program (now known as Clean Cars 4 All) to increase access to clean vehicles for priority populations. Finally, SB 1275 requires CARB to include a long-term plan for CVRP and related light-duty vehicle incentives. Although SB 1275 requires CARB to update the plan every three years, staff has provided updates to all components of the plan annually with each Funding Plan since. This year, staff will include a more in-depth and comprehensive update that will encompass all light-duty vehicle purchase incentive and clean mobility investments as part of the final version of the FY 2022-23 Funding Plan for Clean Transportation Incentives. A summary of the long-term plan is provided in Chapter 3.

SB 1204 (Lara, Chapter 524, Statutes of 2014) guides CARB's heavy-duty vehicle investments funded with Cap-and-Trade auction proceeds. SB 1204 creates the California Clean Truck, Bus, and Off-Road Vehicle and Equipment Technology Program intended to help accelerate the introduction of the next generation of cleaner heavy-duty vehicles and engines with a priority on projects that benefit priority populations. Among other requirements, SB 1204 directs CARB to develop an annual framework and plan to guide these investments.

SB 1403 (Lara, Chapter 370, Statutes of 2018) modifies the direction from SB 1204, directing CARB, in consultation with CEC, to develop and include a three-year investment strategy for heavy-duty vehicles and equipment as part of the annual Funding Plan. The strategy is to include a funding roadmap for the upcoming FY and a forecast of estimated funding needs for the subsequent two FYs. SB 1403 also calls on CARB to include information related to milestones achieved through the state's school bus incentives programs and the projected need for funding.

SB 350 (de León, Chapter 547, Statutes of 2015) directed CARB to conduct a study on the barriers for priority populations to access clean transportation options, as well as recommendations on how to increase access. In February 2018, CARB released the Low-Income Barriers Study, Part B: Overcoming Barriers to Clean Transportation Access for Low Income Residents (CARB's SB 350 Guidance Document or Guidance Document). CARB's Guidance Document has provided a critical foundation for equity efforts across the state, building an understanding of the main barriers residents face in accessing clean transportation and mobility options and providing recommendations to overcome these barriers. This includes short-term and longer-term implementable actions that the Legislature, communities, state and local planning, transportation, public health, and air quality agencies can take to formulate innovative, meaningful solutions to address unique community-based clean transportation and mobility needs.

AB 841 (Ting, Chapter 372, Statutes of 2020) mandates that all electric vehicle (EV) charging infrastructure and equipment located on the customer side of the electric meter that is funded or authorized, in whole or in part by CARB, the Energy Commission, or the California

Public Utilities Commission (CPUC) shall be installed by a contractor holding "the appropriate license classification as determined by the Contractors' State License Board." Additionally, at least one electrician on each crew, at any given time, must hold an Electric Vehicle Infrastructure Training Program (EVITP) certification; and for projects with at least one charging port supplying 25 kW or more, at least 25 percent of the electricians on the crew must hold an EVITP certification. These new requirements apply to any work performed on or after January 1, 2022, for projects decided or entering contract or agreement with any public agency on or after January 1, 2021. While this requirement is not directly addressed in the funding plan, staff will incorporate these requirements as technical changes into project guidelines and grant terms and conditions as necessary.

AB 794 (Carrillo, Chapter 748, Statutes of 2021) directs CARB to implement new compliance verification requirements regarding labor standards for drayage and short haul trucking fleets participating in applicable CARB incentive programs beginning in FY 2022-23. The bill requires these fleets to provide a self-attestation and demonstrate that they do not have any "applicable law violations," which the bill defines as a final determination, order, judgment, or award issued against a fleet purchaser of vehicles for engaging in illegal conduct related to the misclassification of employees as independent contractors, including the failure to pay wages, imposing unlawful expenses on employees, etc. In addition to providing the self-attestation, fleet purchasers receiving an incentive would be required to sign contracts conditioning any incentive received on certified compliance with the requirements in the statute, as specified. AB 794 also allows third parties to report to CARB that a trucking fleet has failed to provide a truthful attestation. If the third party can substantiate these allegations, then, CARB must evaluate the report to determine whether the fleet has failed to comply with applicable laws. Finally, AB 794 also requires CARB to develop a new website to display disclosures and attestations from short-haul and drayage trucking fleets that receive an incentive.

SB 372 (Leyva, Chapter 639, Statutes of 2021) directs CARB and the California Pollution Control Financing Authority (CPCFA) to develop and administer a program to make financing tools and non-financial supports available to the owners of medium- and heavy-duty vehicle fleets to facilitate the transition of these fleets to ZEVs. This program is referred to as the Medium- and Heavy-Duty Zero-Emission Vehicle Fleet Purchasing Assistance Program. Elements of assistance to transition various sized fleets to zero-emission include: financial supports that are targeted toward priority populations, non-financial supports (such as technical support and a "one-stop-shop" for financial and technical information), outreach and marketing, metrics to determine program success, and coordination with partnering State agencies. In order to fund this program, CARB may allocate funding from (but not limited to) the Air Quality Improvement Fund, GGRF, and/or the General Fund.

AB 630 (Cooper, Chapter 636, Statutes of 2017) requires the CARB to set specific and measurable goals annually for the EFMP Scrap Only program and the Clean Cars 4 All Scrap-and-Replace programs. AB 630 also requires CARB to evaluate the performance of each program towards these goals and to update the guidelines if necessary, to ensure these goals are met.

Funding Plan Development Process, Outreach, & Community Engagement

To date, staff held 1 listening session, 5 public workshops, 12 public work group meetings, 5 targeted meetings with African American community leaders, one meeting with a non-profit organization representing tribal governments, 2 meetings with labor unions, presented at 3 Access Clean California Outreach Partner meetings, and numerous one-on-one discussions with interested stakeholders and community advocates to develop the preliminary recommendations contained in this document. Table 4 summarizes these public meetings.

Table 4: Public Meetings on the Development of FY 2022-23 Funding Plan

Date	Meeting
2/10/22	Public Workshop[31] on the FY 2022-23 Update to the Three-Year Plan for Light-Duty Vehicles and Clean Transportation Investments #1
2/17/22	Public Work Group[32] to Discuss Clean Mobility Investment Projects and the FY 2022-23 Update to the Three-Year Plan for Clean Transportation Equity Investments #1
3/15/22	Public Workshop for FY 2022-23 Funding Plan for Clean Transportation Incentives #1
3/22/22	Public Work Group on Heavy-Duty Investments for the FY 2022-23 Funding Plan for Clean Transportation Incentives #1
3/30/22	Public Workshop on the FY 2022-23 Update to the Three-Year Plan for Light-Duty Vehicles and Clean Transportation Investments #2
4/8/22	Public Work Group for the FY 2022-23 Long-Term Heavy-Duty Investment Strategy #1
4/19/22	Public Work Group to Discuss Clean Mobility Investment Projects and the FY 2022-23 Update to the Three-Year Plan for Clean Transportation Equity Investments #2
5/3/22	Public Work Group on FY 2022-23 HVIP #1
5/4/22	Public Work Group to Discuss the Truck Loan Assistance Program and Proposed Zero-Emission Truck Loan Pilot for the FY 2022-23 Funding Plan
5/11/22	Public Work Group to Discuss CVRP for FY 2022-23 #1
5/25/22	Public Work Group for the FY 2022-23 Long-Term Heavy-Duty Investment Strategy #2
6/9/22	Public Work Group to Discuss Clean Mobility Investment Projects and the FY 2022-23 Update to the Three-Year Plan for Clean Transportation Equity Investments #3
6/22/22	Public Workshop on the FY 2022-23 Update to the Three-Year Plan for Light-Duty Vehicles and Clean Transportation Investments #3
6/28/22	Public Work Group on FY 2022-23 HVIP #2

[31] For purposes of Funding Plan development, public workshops are intended to provide general information on the Funding Plan process, proposed budget, and provide program updates.
[32] For purposes of Funding Plan development, public work groups are intended to include project specific discussions on proposed funding allocations, policy updates, and program changes.

Date	Meeting
7/6/22	Public Work Group to Discuss CVRP for FY 2022-23 #2
7/21/22	Public Workshop on the FY 2022-23 Funding Plan for Clean Transportation Incentives #2
7/28/22	Listening Session: Transitioning to Zero-Emission Trucks
9/1/22	Public Work Group Meeting to Discuss Light-Duty Vehicle Purchase Incentive Programs for FY 2022-23
9/8/22	Public Workshop on the FY 2022-23 Funding Plan for Clean Transportation Incentives

Staff is also taking steps to more meaningfully engage with priority populations and advocates beyond the traditional Funding Plan public process. Staff leveraged Access Clean California's statewide network of outreach partners to seek feedback from local CBO and community member led grassroots community leaders on the development of the Funding Plan. This included one-on-one meetings with community partners, attending monthly outreach partner meetings, and administering surveys. The purpose of the survey was to identify outreach partner investment priorities and provide an opportunity for partners to provide feedback on program implementation and policies, and request one-on-one meetings with CARB staff. Staff intend to build upon and expand the community engagement surveys so that CARB can better tailor outreach and community engagement strategies for future funding plans and incentive program development.

In addition, staff met with leaders from African American communities and a non-profit organization representing tribal governments to explore ways to reduce barriers to CARB programs. Although funding is available for priority communities, CARB recognizes that some communities such as tribal governments face unique barriers to accessing clean transportation options. As a part of Statewide CMO in 2020, approximately $2 million in funding was set aside specifically for tribal governments for community needs assessments (CTNA) and mobility project vouchers (MVP). Staff are currently exploring additional opportunities with other state agencies to expand tribal government engagement efforts as well as supporting holistic solutions to barriers tribal government face and will be included in future funding plans. Moreover, staff has also engaged with labor union representatives and small fleet operators to better tailor project design to serve the intended audience. A summary of feedback is included in Table 5.

Table 5: Community Engagement Feedback

Feedback	Status
Expand outreach and education by creating material that address general concerns community members have about ZEVs such as access to affordable and reliable charging and vehicle cost of ownership.	In progress with program alignment work and Access Clean California
Expand application support, case management, and language support	In progress with individual programs as well as Access Clean California
Structure programs using a needs-based or other model rather than first come first serve	In progress with Financing Assistance, Clean Cars 4 All, and mobility investments
Streamline application process and expedite incentive distribution	In progress with program alignment work for vehicle purchase incentives, Access Clean California, and mobility investments
Ensure application process is not administratively burdensome or contains questions that are viewed as invasive	In progress with individual programs as well as Access Clean California
Ensure fleets receiving funding are in compliance with applicable labor laws	In progress with individual programs implementing AB 794
Offer different communication options when applying for incentives (e.g., email, short message service or text, phone)	In progress with individual programs as well as Access Clean California
Fund priority populations directly versus funneling funding through air districts, non-government organizations, non-profits, or other public agencies	CARB is currently limited to funding non-profits and public agencies however, CARB will continue to meet with communities and explore options to ensure dollars are reaching priority populations
Provide information on the historical demographic distribution of funding	In progress with individual programs
Ensure funding support priority populations across the state	In progress with individual programs
Improve efficiency for working group meetings by providing relevant meeting information and materials in advanced	Staff developed a work group presentation template and adjusted timelines for posting work group materials

As noted in Table 5, many of these recommendations are already in progress as a part of CARB's ongoing effort to improve and streamline incentives. However, others require some additional development and analysis, and staff will continue to meet with priority populations to further explore these concepts. In addition, CARB recognizes that these actions are initial steps and will continue to improve and build upon its approach to community outreach and engagement in developing future funding plans.

Furthermore, when considering funding allocations, staff has reviewed priorities highlighted by communities through other processes, such as AB 617, through internal coordination efforts and reviewing existing community emission reduction plans. CARB staff continue to collaborate internally with staff working on regulations, such as the Advanced Clean Cars and Advanced Clean Fleets rulemaking, the updates to the Scoping Plan, and across the broader clean transportation incentive portfolio in order to better consider community identified needs and solutions in expanding access to the ZEV market.

Staff also considered feedback provided at the Incentives Program Advisory Group (IPAG) public meetings led by Vice Chair Sandy Berg and Board members Davina Hurt and Gideon Kracov held over the past year. While IPAG primarily focused on potential changes to the Carl Moyer Program and it's On-Road Voucher Incentive Program, staff considered relevant feedback on broader policy issues including providing greater support and access for small fleets and small businesses statewide, improving the environmental justice performance of the program, and accelerating zero emission truck funding while better partnering vehicle adoption with infrastructure expansion.

In addition to the development of the Funding Plan, staff and program administrators work in collaboration with many community partners around the state during program implementation. CARB is committed to working with community-based and community member led grassroots organizations and continues to seek new partners rooted in communities to ensure state dollars are reaching communities that need them the most. Additional information on how CARB works with CBOs to increase awareness and access to incentives can be found in the Three-Year Plan for CVRP, the EV Market, Clean Transportation Equity Investments, and Outreach in Appendix C of this Funding Plan.

Chapter 2: Proposed Funding Allocations

With zero-emission technologies becoming widely available, now is the optimal time for the state to double down on supporting equitable access to clean transportation options for priority populations. The proposed investments are designed to equitably scale the state's ZEV market and transportation system toward sustainability in the key vehicle segments ready for a significant ramp up in commercial deployment as well as support a variety of clean mobility solutions.

To help reach scale, the projects under consideration continue to build on investments from previous budget cycles. These include projects that aim to accelerate deployment of the cleanest mobile source technologies and to improve access to clean vehicle purchasing incentives and clean mobility investments in communities most impacted by poor air quality. Previous years' investments included access to transportation options like transit, biking, and walking. The proposed investments also include targeted support and when paired with regulations, have proven successful in advancing technology growth and transforming the market. Broad purchase incentives continue to play an important role in the investment portfolio, particularly as new technologies come to market. But as technologies become more established and demand continues to grow, CARB is accelerating its shift from broad purchase incentives to more targeted strategies that support lower-income consumers, households, and small fleets facing the greatest barriers to adoption. Ultimately, public dollars need to be focused most firmly on stakeholders who may not otherwise benefit rapidly from market-driven investments.

More targeted investments are an important element in helping to ensure an equitable transition to a clean transportation future. Increasing access to clean transportation and mobility options for all Californians, including priority populations who have been disproportionately impacted by air pollution and traditionally left out of transportation decision-making processes, is critical in transitioning the state's transportation sector to zero-emission. The goal is to strategically invest in community-led and identified projects that meet specific clean mobility needs with a focus on maximizing impacts and filling critical gaps to ensure these communities are not left behind in this transition. CARB clean mobility investments are not solely focused on the number of projects in communities, as this will not help us to reach our broader clean mobility or equity goals. Staff continue to work with grantees to assess the quality and satisfaction of services provided and the level of impact, including socioeconomic benefits and other quality of life improvements that come with a well-planned, interconnected, and sustainable transportation system.

Staff determined proposed project allocations by incorporating line items from the Budget Act of 2022 and associated trailer budget bills, evaluating anticipated demand, considering funding gaps, reviewing the long-term planning elements of previous funding plans, considering priorities identified by CARB community engagement efforts, community emission reduction plans, assessing other available funding sources, and taking into account feedback from stakeholders.

Proposed Project Allocations

Staff's proposed funding allocations are shown in Table 6, which include funding amounts assigned directly to projects in the state budget. SB 179 specifically assigns the following from both General Fund and GGRF allocations:

- $75 million for zero-emission drayage trucks,
- $70 million for zero-emission transit buses,
- $125 to establish the Statewide Clean Cars 4 All program,
- $80 million to support air district Clean Cars 4 All programs,
- $10 million to support ZAP,
- $40 million for commercial harbor craft, and
- $135 million for zero-emission school buses through HVIP.

Table 6 includes these allocations along with staff's proposed allocations for the remainder of the funding approved in the state budget. More information regarding each of these projects and rationale for these recommendations are described more fully in the remaining sections of this document.

Table 6: Proposed FY 2022-23 Project Allocations (Millions)*

Project Category	Low Carbon Transportation	General Fund	Proposition 98 General Funds	AQIP	Total Allocation
Vehicle Purchase Incentive Programs (SB 1275)	-	-	-	-	-
Financing Assistance	*$66*	-	-	-	$66
Clean Cars 4 All (Statewide and Local Programs)	*$40*	[$205]	-	-	$245
Electric Bicycle Incentives Project	*$3*	-	-	-	$3
Access Clean California	*$1*	-	-	-	$1
California Integrated Travel Project (Cal-ITP)	*$1*	-	-	-	$1
Zero-Emission Assistance Program (ZAP)	-	[$10]	-	-	$10
Clean Mobility Investments (SB 1275)	-	-	-	-	-
CMO	-	*$20*	-	-	$20
CMiS	-	*$15*	-	-	$15
STEP	*$15*	-	-	-	$15
Planning and Capacity Building	-	*$5*	-	-	$5
Heavy-Duty and Off-Road Equipment	-	-	-	-	-
HVIP–Standard	*$265*	-	-	-	$265
HVIP–Transit Buses	-	[$70]	-	-	$70
HVIP–School Buses	-	[$135]	[$1,125]	-	$1,260
HVIP–Drayage Trucks	-	[$157]	-	-	$157
HVIP–Innovative Small e-Fleets	*$35*	-	-	-	$35
CORE	*$273*	-	-	-	$273
Advanced Technology Demonstration and Pilot Projects	*$22*	[$53**]	-	-	$75
Demonstration and Pilot Projects-Commercial Harbor Craft	[$20]	[$40]	-	-	$60
Truck Loan Assistance Program	-	-	-	$28.64	$28.64
Zero-Emission Truck Loan Pilot	*$5*	-	-	-	$5
Total	**$746**	**$710**	**$1,125**	**$28.64**	**$2,610**

** Does not include any adjustments for project administration.*

** FY 2021-22 funding for emerging opportunities within zero-emission vehicles, zero-emission components, and zero-emission vehicle charging or refueling equipment as described in AB 211.

NOTE: Amounts in brackets are specifically allocated in the State budget and can not be adjusted by Board action.

CVRP

No new funding for consumer rebates for new ZEV purchases through the CVRP. CVRP received a substantial upfront allocation of $515 million as a part of last year's budget that is intended to fund CVRP through FY 2023-24. However, staff is providing updated funding projections and proposing amendments to changes approved by the Board in November 2021. These proposed amendments continue to shift the program's focus to priority populations by providing a significant increase to Increased Rebate amounts for low- and moderate-income consumers, providing incentives for charging for every Increased Rebate issued, and bringing the incentive to the point of purchase through the statewide expansion of CVRP's pre-approval pilot, Rebate Now.

Clean Transportation Equity Projects

The proposed $381 million for vehicle purchase incentive programs and clean mobility investments will help to increase access to clean transportation and mobility options benefiting all Californians, including priority populations, consistent with the direction provided by SB 1275 and SB 350. This covers vehicle purchase incentives, clean mobility investments, and planning and capacity building.

Heavy-Duty Vehicle & Off-Road Equipment Investments

CARB's proposal for the $2.2 billion for heavy-duty and off-road equipment provides funding projects that support multiple technologies at different points on their commercialization arcs to achieve emission reductions today, as well as those that need to mature to meet future goals. Incentives are needed to help fund the development of advanced technologies through demonstration and pilot projects. And as these technologies reach the market, they progress to funding programs such as HVIP and CORE, which offer vouchers for early commercial advanced technologies. Following the success of last year's Project 800 initiative to support the purchase of 800 zero-emission drayage trucks, staff is proposing to launch a similar initiative for zero-emission refuse trucks that provide direct emission reductions in the priority communities they serve. Finally, the Truck Loan Assistance Program helps small business truckers on the margins and at most risk for lending to secure financing for newer trucks to meet compliance deadlines for CARB's in-use truck and bus regulation. The new Zero-Emission Truck Loan Pilot will use the Truck Loan Assistance model but focus on financing for heavy-duty ZEVs and infrastructure for small business fleets.

Consistent with last year, staff proposes to set aside funding for drayage trucks, transit buses, and school buses, all of which are primed to rapidly transition to zero-emission. In line with Legislative direction, these set-asides will continue to be administered through HVIP. Staff is proposing to continue the Innovative Small e-Fleets Pilot within HVIP and focus on equitable investments that address challenges to zero-emission technology adoption for owner operators and small fleets – an investment that aligns well with parallel proposals to focus the Carl Moyer's VIP program on small fleet electrification. Additionally, staff will coordinate with CEC, Department of General Services, and Workforce Development Board (CWDB) to provide grants through HVIP to local education agencies to replace existing internal

combustion school buses. Staff is also proposing to allocate considerably more funding to CORE to accelerate deployment of advanced technology in the off-road sector.

State Operations

This year, the Budget Act of 2022 and related trailer budget bills have included authorization to allocate up to 5 percent of the General Fund and Low Carbon Transportation appropriations for administration costs. Although CARB is approved for 5 percent, CARB typically only uses 1 percent.

Measures to Expedite Funding to Projects

To minimize market disruptions, staff is prioritizing delivering funds to projects quickly so that the air quality and economic benefits of these projects can be realized. To do so, CARB intends to rely on contingency provisions outlined in Chapter 6 included in the FY 2021-22 Funding Plan and the Executive Officer's authority to allocate a portion of funds to first-come, first-served projects prior to Board consideration of the Funding Plan.[33] Additional details are included in the following chapters.

Priority Population Investment Targets

A key component of these programs is providing health and economic benefits to California's priority populations. AB 1550 establishes a target for low-income community, disadvantaged community, and low-income households for the state's Cap-and-Trade auction proceeds investments[34]. Program administrators are required to focus outreach and engagement in low-income and disadvantaged communities to ensure funding reaches communities and provide benefits where they are most needed to help meet and exceed these targets.

On May 3, 2022, the California Environmental Protection Agency (CalEPA) updated the designation of disadvantaged communities to include additional geographic areas and the reference years used to determine low-income communities and household thresholds.[35] Additional areas included are lands under the control of Federally-recognized tribal governments, census tracts receiving the highest 25 percent of overall scores in the California Communities Environmental Health Screening Tool (CalEnviroScreen) 4.0, and census tracts lacking overall scores in CalEnviroScreen 4.0 due to data gaps, but receiving the highest 5 percent of CalEnviroScreen 4.0 cumulative pollution burden scores. In addition, census tracts identified in the 2017 disadvantaged community designation as disadvantaged will maintain their designation. With this year's Funding Plan, staff recommended that a minimum of at least 60-70 percent of the Low Carbon Transportation funding be invested in projects meeting one of the AB 1550 criteria with the following targets:

- At least 45-50 percent of funds for projects located within, and benefiting individuals living in, disadvantaged communities.

[33] California Air Resources Board. *Proposed Fiscal Year 2021-22 Funding Plan for Clean Transportation Incentives.* November 2021. https://ww2.arb.ca.gov/sites/default/files/2021-10/fy21-22_fundingplan.pdf
[34] HSC Section 39713.
[35] Additional information on CalEPA's designation is available at: https://calepa.ca.gov/envjustice/ghginvest/

- At least 15-20 percent of funds for projects located within and benefiting low-income communities or benefiting low-income households.

Each year staff considers the targets to be a floor and strives to exceed them. In designing project solicitations and implementation requirements, staff considers whether there are provisions that can be incorporated to help ensure that CARB exceeds these minimum targets. CARB is not limiting the disadvantaged community and low-income community/household focus to Low Carbon Transportation investments. Investments from the Air Quality Improvement Fund and the General Fund are also designed to benefit low-income and disadvantaged communities as well. In the current FY, staff estimate over 70 percent of $2.61 billion in funds is expected to benefit priority populations.

Safeguards for Cap-and-Trade Auction Revenue Uncertainty

The Low Carbon Transportation Investments are a part of the Cap-and-Trade Expenditure Plan developed annually by the Legislature. As in past years, this Funding Plan relies in part on future revenues generated at auctions in the upcoming FY. To account for uncertainties in the revenue projections used to develop the appropriations, CARB is required to not encumber 25 percent of the Low Carbon Transportation appropriation until the fourth auction is completed, which is expected to occur in May 2023. The 25 percent restriction applies individually to each of the Low Carbon Transportation suballocations (Clean Transportation Equity, and Heavy-Duty Vehicles and Off-Road Equipment). Thus, $31.5 million in funding from the Clean Transportation Equity projects and $155 million from the Heavy-Duty Vehicles and Off-Road Equipment projects must not be encumbered until after the fourth auction, so some projects will be delayed in receiving part or all of their allocation. Staff is considering how to divide the 75 percent of the Low Carbon Transportation appropriation that is initially available between projects in each of the three suballocations in a manner that reduces project disruptions and maximizes immediate benefits to communities.

Chapter 3: Clean Transportation Equity & Light-Duty Investments

Overview

CARB's clean transportation and light-duty vehicle investments are aimed at supporting the long-term transformation of California's fleet and ensuring that this transformation occurs in an equitable manner. The investments include vehicle purchase incentives and clean mobility investments, both of which incorporate and are supported by outreach, technical assistance, and workforce training and development. Starting in 2009, CVRP laid the initial foundation for vehicle purchase incentives. CARB began implementing clean mobility pilot projects in FY 2014-15, which provided a critical complement to, and expanded upon, these initial investments through providing alternative community mobility options. Together, these investment strategies work to meet policy, statutory, and regulatory goals and requirements, and support an equitable transition to a clean transportation future.

- *Vehicle Purchase Incentives:* CVRP supports increasing the number of ZEVs on California's roadways to meet deployment goals and achieve large scale transformation of the fleet, while also providing support to increase ZEV adoption in low-income households. Clean Cars 4 All and Financing Assistance are designed to increase access to cleaner vehicles for all Californians, focusing on priority populations, as prescribed by SB 1275 and supported by SB 350, as well as provide support to the secondary/used ZEV market. The Electric Bicycles Incentive Project[36], is the newest purchase incentive project designed to help Californians reduce their VMT by lowering barriers to electric bicycle (e-bike) ownership, as well as to educate Californians about bicycle safety and support local businesses. Access Clean California continues to provide resources for lower-income individuals to learn about and take advantage of all the state and local clean energy benefits that they qualify for. Each of these programs provide opportunities for all California residents to participate in vehicle purchase incentive programs as well as to increase consumer awareness of clean vehicles in priority populations.
- *Clean Mobility Investments:* Clean mobility investments address the transportation needs of all Californians, living in disadvantaged and low-income communities, by investing in sustainable community actions that support a variety of clean mobility solutions (other than vehicle ownership) to expand access and promote a more sustainable transportation system, such as zero-emission car sharing, vanpooling, bike sharing, and public transit to be flexible and responsive to community-identified transportation needs. Per CARB's SB 350 Guidance Document recommendations, clean mobility investments also incorporate activities that support more meaningful engagement with communities to understand unique transportation needs and gaps, tailoring outreach to increase awareness of funding programs, providing technical assistance to strengthen partnerships and funding accessibility, and expanding workforce training and career development opportunities. Based on critical lessons and evaluation of programs over time, CARB's goal is to transition from the mobility

[36] Budget Act of 2021. Senate Bill 170 (Skinner, Chapter 240, Statutes of 2021).

pilot project phase to community-based programs to accelerate investments and expand services available that continue to prioritize equity.

These incentive projects are the result of multiple key legislative drivers, including SB 1275, SB 535 (de León, Chapter 830, Statutes of 2011), AB 1550, and SB 350, but also recognize that increasing access and consumer awareness must be an ongoing process. In addition, equity projects follow SB 535's direction that investments must benefit California's disadvantaged communities. Projects also incorporate the findings of CARB's SB 350 Guidance Document. These projects provide direct benefits to all Californians, including priority populations, such as reduced GHG, criteria pollutant, and toxics emissions, as well as other co-benefits. Co-benefits include socioeconomic and other related benefits such as job creation, and VMT and fossil fuel reductions.

A core priority across current and future equity projects is incorporating CARB's SB 350 Guidance Document equity principles and implementing recommendations in priority populations. The Guidance Document identifies several barriers to accessing clean transportation and mobility solutions, such as affordability, funding for clean mobility investments, and a lack of awareness of clean mobility options. The Guidance Document also identifies community-specific barriers, like a lack of access, convenience, and safety. Because each community is unique and there are many factors to consider, such as geographic, economic, demographic, or cultural and linguistic attributes and varied styles of communication, there is no single statewide solution to address all barriers. This increases the importance of developing equitable, but community-specific, solutions and prioritizing efforts for all Californians, including priority populations, that face disproportionate impacts.

CARB is also continuing its work with stakeholders and through evaluation contracts with third parties to determine metrics for measuring outcomes and success of clean transportation equity and light-duty vehicle projects. This includes evaluating how effective these projects are at generating behavioral changes and determining how we can expand the metrics used to measure the socioeconomic benefits of mobility projects. This data will be used in the future to guide funding and design recommendations.

In addition, community members have asked staff to share data on the demographics of those individuals that have participated in CARB's clean transportation incentive programs, particularly from the light-duty purchase incentive and mobility projects. Unfortunately, not every project has collected demographic data, and of those that have, there is not consistency across the methods in which data is collected. Where data is available, staff has provided it within the Funding Plan and is looking for other ways to ensure the data remains public and accessible. Staff are also working to expand and standardize data collection for all the clean transportation and light-duty vehicle incentive programs including CVRP, Clean Cars 4 All, Financing Assistance, and clean mobility investments within the next year.

CARB's equity projects also support several complementary programs and strategies, such as the Sustainable Communities and Climate Protection Program, or SB 375, and CARB's Mobile Source Strategy and Climate Change Scoping Plan. Given the collective emphasis on air quality, equity, and community engagement, staff continues to work across other CARB programs and with state and local agencies, such as the California Strategic Growth Council,

Governor's Office of Business and Economic Development, sister transportation agencies, and council of governments, to share lessons learned, maximize the benefits of each project, promote for sustainable and equitable communities, and ensure these benefits are realized in priority populations.

Summary of Changes to Long-Term Plans for EV Market

EV Market Findings (SB 1275)

SB 1275, signed into law in 2014, established the Charge Ahead California Initiative with the goals of placing one million zero-emission and near zero-emission vehicles in California by 2023 to establish a self-sustaining market and increase access to these vehicles for all Californians, including priority populations. Among other requirements, SB 1275 required CARB to include a long-term plan for CVRP and related programs in the FY 2016-17 Funding Plan. The plan must include:

- A three-year forecast of funding needs to support the goals of technology advancement, market readiness, and consumer acceptance of advanced vehicle technologies.
- A market and technology assessment for each funded vehicle technology.
- An assessment of when a self-sustaining market is expected.
- An assessment of how to modify existing incentives to recognize expected changes in future market conditions.

As part of the FY 2016-17 Funding Plan, staff, in consultation with stakeholders, proposed a framework for the plan and provided the first three-year funding need forecast along with a market and technology assessment. Staff also proposed a suite of indicators to measure EV market growth over time. Staff provided a major update to the three-year plan in the FY 2019-20 Funding Plan. Although SB 1275 required CARB to update the plan every three years, staff has provided updates to all components of the plan each year since FY 2016-17. This year, staff have included an in-depth and comprehensive update to the three-year plan as part of Appendix C of this funding plan. This update encompasses all light-duty vehicle purchase incentive efforts and clean mobility investments.

As part of the Supplemental Report of the 2018-19 Budget Act,[37] CARB is required to submit an annual supplemental report, until January 1, 2030, that includes a forecast of the total state rebate investment necessary to reach the goal of placing at least 5 million EVs in service on California's roads. Development of the first report occurred alongside the development of the update to the long-term plan for CVRP and light-duty incentives in 2019. The first report was provided in the FY 2019-20 Funding Plan as part of Appendix C and will be updated in the Funding Plan annually thereafter until 2030. Per the direction of SB 129, last year's plan included a schedule to phase down CVRP rebates based on cumulative sales over the next

[37] Supplemental Report of the 2018-19 Budget Act. https://lao.ca.gov/reports/2018/3883/supplemental-language-2018.pdf

three FYs (2021-22, 2022-23, and 2023-24) while not impacting the low- and moderate-income bonus. This three-year plan included rebate levels that continue to encourage early adoption of EVs, encourage a sustainable EV market, and support EV sales to reach the state's goal of five million ZEVs by 2030. Staff have provided an update to this phase down strategy in the CVRP section of this chapter.

Since the introduction of the first light-duty long-term plan in FY 2016-17, the EV market has grown tremendously. There have now been over 1.2 million EVs sold in California which has allowed for the state to reach its first EV deployment goal early. However, events over the last few years have changed the EV market landscape and the new vehicle market. In addition to ongoing supply chain issues, inflation and rising interest rates have made both new and used vehicles more expensive. A recent analysis indicates the average price for an EV skyrocketed to $63,821 by December 2021 while the average price of an internal combustion engine vehicle (ICEV) was about $47,000 – a difference of nearly $17,000.[38] Despite ongoing production and supply chain interruptions across all sectors, EV market share in California increased to nearly 16.5 percent in the first half of 2022 demonstrating strong EV market growth and resilience. To support continued EV market growth, the Advanced Clean Cars II regulation takes the state's already growing ZEV market and robust motor vehicle emission control rules and augment them to meet more aggressive tailpipe emissions standards and ramp up to 100 percent ZEVs.[39] Staff reviewed and analyzed EV market data to update assumptions, evaluations, and recommendations for the long-term plan.

Staff is also closely monitoring EV incentives at the federal level. The current federal administration is implementing measures to extend and improve federal EV tax credits. On August 16, 2022, the Inflation Reduction Act[40] was signed into law and includes a number of measures to improve the economy with a focus on working families in America.[41] One of these measures includes a series of amendments to the Qualified Plug-in Electric Drive Motor Vehicle Credit (IRC 30D), now known as the Clean Vehicle Credit, to be phased in over the next few years. Starting August 16, 2022, there will be an added requirement that electric vehicles must have final assembly in North America to be eligible for the credit.[42] Starting January 2023, the 200,000 unit cap for manufacturers will be removed and new manufacturer's suggested retail price (MSRP) and income caps will be effective.[43] The MSRP cap is set at $80,000 for SUVs, vans, and trucks and $55,000 for all other vehicle classes; the

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[38] Osaka, Shannon. Grist. *Batteries are getting cheap. So why aren't electric vehicles?* April 27, 2022. https://grist.org/article/batteries-are-getting-cheap-so-why-arent-electric-vehicles/

[39] California Air Resources Board. *Proposed Advanced Clean Cars II Regulation.* https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/advanced-clean-cars-ii

[40] Text - H.R.5376 - 117th Congress (2021-2022): Inflation Reduction Act of 2022. (2022, August 16). https://www.congress.gov/bill/117th-congress/house-bill/5376

[41] The White House Briefing Room. *FACT SHEET: The Inflation Reduction Act Supports Workers and Families.* August 19, 2022. https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/19/fact-sheet-the-inflation-reduction-act-supports-workers-and-families/

[42] Internal Revenue Service. "Plug-In Electric Drive Vehicle Credit (IRC 30D)". Updated August 16, 2022. Accessed on August 21, 2022. https://www.irs.gov/businesses/plug-in-electric-vehicle-credit-irc-30-and-irc-30d

[43] Text - H.R.5376 - 117th Congress (2021-2022): Inflation Reduction Act of 2022. (2022, August 16). https://www.congress.gov/bill/117th-congress/house-bill/5376

income caps are set at $150,000 for single filers, $225,000 for those filing Head of Household, and $300,000 for those filing jointly.[44] Starting in 2024, a taxpayer may choose to transfer the credit to a dealer, allowing the buyer to receive the credit as a rebate at the point of purchase and requirements around battery component and critical minerals will take effect.[45] In addition to amendments to the Clean Vehicle Credit, the IRA includes the creation of a new tax credit for the purchase of a used EV effective January 1, 2023.[46] Staff will continue to monitor and analyze the impacts of these measures on California's EV market as they roll out over the next few years.

What remains constant is the need to get more ZEVs on California's roads and prioritize complementary clean transportation and mobility equity investments in the process. Incentives will continue to play a critical role in meeting ZEV deployment goals for the foreseeable future, especially to encourage uptake in priority populations. Staff included updated findings and recommendations to support this goal in Appendix C of this year's Funding Plan.

Proposed Allocations for Clean Transportation Equity & Light-Duty Projects

The Budget Act of 2022 and associate budget trailer bills includes $381 million for clean transportation equity investments to help increase access to clean transportation and mobility options benefiting low-income and disadvantaged communities and low-income households consistent with the direction provided by SB 1275 and SB 350. This includes at least $125 million to establish Clean Cars 4 All statewide, at least $80 million for the district-run Clean Cars 4 All programs, and at least $10 million to fund the Zero Emission Assurance Project. Staff proposes to use the remaining funding to provide additional support to the local air districts for implementation of Clean Cars 4 All, and fund Financing Assistance, and electric bike incentives. Finally, staff proposes to use a small portion of the total allocation to fund equity vehicle purchase incentive outreach efforts through Access Clean California and to provide support for California State Transportation Agency's (CalSTA) and its partners, the California Department of Transportation (Caltrans) on Cal-ITP[47]. Cal-ITP strives to make travel simpler and cost-effective for everyone by providing easy and accessible travel planning and payments across California.

Table 7 outlines the proposed allocations for each vehicle purchase incentive program and each clean mobility project, considering current project demand and uptake, administrator capacity to spend funds, and funding that has already been allocated in past FYs but not spent. CARB staff considered stakeholder comments received through the public process and prioritized investments that can result in the most immediate impact in communities. Only 75 percent of the $126 million of Low Carbon Transportation GGRF funding can be

[44] Ibid.
[45] Ibid.
[46] U.S. Department of the Treasury. Press Releases. "Treasury Releases Initial Information on Electric Vehicle Tax Credit Under Newly Enacted Inflation Reduction Act". Released August 16, 2022. Accessed on August 21, 2022. https://home.treasury.gov/news/press-releases/jy0923
[47] https://www.calitp.org/

spent initially with the remaining 25 percent, or $31.5 million, available after the fourth Cap-and-Trade auction of the FY and direction from the Department of Finance.

In Table 7, a separate category is listed for "Planning and Capacity Building" under Clean Transportation Equity Investments. Past funds for outreach, community transportation needs assessments, and technical assistance have all gone through Access Clean California or CARB's clean mobility pilots. This FY, CARB is setting aside specific planning and capacity building funding to support dedicated outreach, ongoing technical assistance, community capacity building, workforce training and development, and other critical clean mobility investment needs. Additionally, further investment to expand workforce training and development in communities will go through CARB's vehicle purchase incentives, clean mobility, planning and capacity building programs this FY. To more fully support economic opportunities across clean transportation sectors and maximize benefits for priority populations, CARB's workforce investments go beyond light-duty vehicles and the ZEV market to include medium- and heavy-duty applications, including the Inclusive, Diverse, Equitable, Accessible, and Local (IDEAL) ZEV Workforce Pilot Project.

Lastly, the budget language also included specific direction for CARB to consider or implement with regard to these projects. Specific direction, such as removing technology types from projects, are addressed within each projects section. However, budget language also included direction across the suite of equity transportation programs to consider increased incentive levels to accommodate increased costs associated with adaptive equipment for eligible Californians with physical disabilities.[48] Staff plans to investigate costs associated with, and types of, adaptive equipment; consult with disability rights advocates; and research the complexities of this issue. Staff will provide an update to the Board in the FY 2023-24 Funding Plan on this direction, and welcome early feedback or ideas from stakeholders.

[48] Section 114, 2(c): https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220SB179

Table 7: FY 2022-23 Proposed Allocations for Vehicle Purchase Incentives and Clean Mobility Investments (millions)

Project Category	Total Allocations to Date*	Low Carbon Transportation Allocation	General Fund Allocation	Total Proposed Allocation
Vehicle Purchase Incentives	-	-	-	-
CVRP	$1,601	-	-	-
Clean Cars 4 All – Statewide Expansion	-	-	$125	$125
Clean Cars 4 All – Air District Programs	$190.6	$40	$80	$120
Financing Assistance	$67.5	$66	-	$66
Electric Bicycles Incentives Project	$10	$3	-	$3
Access Clean California	$14	$1	-	$1
Cal-ITP	-	$1	-	$1
Zero-Emission Assistance Program (ZAP)	-	-	$10	$10
Clean Mobility Investments	-	-	-	-
CMO (includes Regional Clean Mobility Pilots)	$74.3+	-	$20	$20
CMiS Pilot Project	$34.6	-	$15	$15
STEP	$44.5	$15	-	$15
Planning and Capacity Building, Workforce Training and Development	$4.775++	-	$5	$5
Total	**$2,041.275**	**$126**	**$255**	**$381**

**Funding shown here includes Low Carbon Transportation Allocations, AQIP allocations, and VW settlement Funds. CVRP received $146 million from AQIP and has received $940 million from Low Carbon Transportation. Since FY 2017-18, $25 million of each year's CVRP allocation has been earmarked for increased rebates for low- and moderate-income applicants. Clean Cars 4 All received $3.6 million from AQIP and $10 million from the VW settlement funds. Financing Assistance received $10 million from the VW settlement funds, and Access Clean California also received $5 million from the VW settlement funds. Totals are rounded to the nearest million.*

+$8M in funding was provided through partnership with CEC.

++ $1.5M for FY 2021-22 Clean Transportation Equity Investments, $1M in FY 2020-21 one percent GGRF State Operations funding to support IDEAL ZEV Workforce Pilot Project (IDEAL ZEV Workforce) implementation with CEC, $1M in FY 2021-22 one percent GGRF State Operations funding to replicate IDEAL ZEV Workforce investments in other communities or support pre-apprenticeship programs, and $1.275M in FY 2021-22 one percent GGRF State Operations funding for a new transportation electrification pre-apprenticeship program to be developed through partnership with CEC.

Vehicle Purchase Incentives

Light-duty vehicle purchase incentives play an important role in increasing the number of ZEVs on California's roadways and achieving large-scale transformation of the fleet. These incentive projects are a result of multiple key legislative drivers, including SB 1275, SB 535, AB 1550, and SB 350, but also recognize that increasing clean transportation access and consumer awareness must be an ongoing process. Equity focused projects, such as Clean Cars 4 All, Financing Assistance programs, and increased CVRP rebates for lower-income applicants, provide purchase incentives to increase ZEV adoption in priority populations. The new Electric Bicycles Incentive Project is designed to help Californians reduce their VMT by reducing barriers to e-bike ownership. Access Clean California provides resources for lower-income individuals to find and apply for all of the state and local clean transportation and energy benefits they qualify for, such as money for public transit or a new or used EV; free or low-cost home charging; and no-cost home solar.

Driven by community need and legislation (SB 1275, SB 350, and AB 1550), the Clean Cars 4 All and Financing Assistance programs help increase access to cleaner vehicles for priority populations, including lower income households and disadvantaged communities. These programs also offer critical support to the secondary ZEV market. These programs promote ZEV awareness, education, and provide a financial stimulus to lower-income Californians to aid in the purchase of cleaner vehicles. While each program has different goals and eligibility requirements, they complement each other by providing financial tools and incentives to make advanced clean technology vehicles more affordable and achievable for lower-income consumers. Figure 3 illustrates key metrics of success for CARB's light-duty vehicle purchase incentives in their support of healthy communities, clean air goals, and growing the green economy in California.

Figure 3: CARB Light-Duty Vehicle Purchase Incentive Programs – Metrics of Success

Supporting Healthy Communities	Supporting Clean Air Goals	Growing the Green Economy
• Over $400 million, or over 32 percent, of all light-duty vehicle purchase incentive funds have supported clean vehicle purchases benefiting priority populations. • Over $2.9 million in CVRP funds have supported over 700 light-duty electric vehicles for public fleets operating in Disadvantaged Communities, as identified in CalEnviroScreen 3.0.	• CARB's light-duty vehicle purchase incentive programs have resulted in a reduction of over 9.6 million metric tons of carbon dioxide (CO2) equivalent. • An estimated 48+ million gallons of fuel use avoided as a result of the clean vehicles funded through CARB's light-duty vehicle purchase incentive programs.	• CVRP, Clean Cars 4 All, and Financing Assistance have funded $1.2+ billion toward the purchase of over 475,000 clean vehicles since 2010. • There have been over 1.1 million new light-duty electric vehicles sold in California with 42 percent of these purchases supported by CARB's light-duty vehicle purchase incentive programs.

Lessons learned throughout the life of these programs have allowed for program refinements to better serve lower-income Californians and achieve California's climate goals. Examples of this refinement include aligning definitions across the various vehicle purchase incentives and moving from a first-come-first-served model to a needs-based model of implementation.

Staff has learned from the Financing Assistance project that lower-income consumers can be wary of battery reliability in ZEVs. In an effort to address this concern, AB 193 (Cervantes, Chapter 363, Statutes of 2018) established ZAP to help lower-income Californians reduce the risk of buying a used ZEV by providing a rebate or vehicle service contract for the replacement battery or fuel cell component. AB 193 states that CARB will "establish ZAP by allocating moneys, available upon appropriation from the Legislature in the annual Budget Act or other statute." Since no such funding or resources have been allocated in prior budget cycles, CARB has been unable to implement ZAP. In the interim, staff has initiated a data collection project through the local financing assistance program in anticipation of funding for a statewide program. The Budget Act of 2022 has identified the initial funding for ZAP and updates can be found later in this section of the Funding Plan. Additionally, starting with model year 2026, the Advanced Clean Cars II proposal includes a number of ZEV assurance measures, which include proposals to set minimum warranty and durability requirements, increase serviceability, and facilitate charging and battery labeling, which will help ensure all consumers can successfully replace their fossil fuel-powered vehicles with new or used vehicles that meet their needs for transportation and protect the emission benefits of the

program. As CARB works to establish these requirements by law, staff will continue to do research and lay the groundwork to support a statewide ZAP.

Despite the challenges and barriers faced by lower-income consumers, demand from these programs indicates that there is substantial interest in purchasing cleaner vehicles. As these programs reach more Californians and demand grows, there is a need to further develop and improve these programs. This year, staff is proposing a significant increase to vehicle purchase incentive amounts for lower-income car buyers based on stakeholder feedback, EV market analysis, and rising costs due to inflation. Additionally, the purchase price of vehicles receiving a CVRP increased rebate and those receiving incentives through Clean Cars 4 All have increased about $15,000 since 2016. Staff also recognizes that some lower-income consumers may not have a high enough taxable income to take advantage of the full Federal EV Tax Credit which helps offset costs of a new EV. While these programs have seen record levels of interest, it has been increasingly difficult for approved applicants to find an affordable EV given current incentive amounts.

Staff's proposal takes a step towards continued alignment across all three vehicle purchase incentive programs (CVRP, Clean Cars 4 All, and Financing Assistance) and significantly increases the total stacked incentive amounts available for eligible income-qualified car buyers while also focusing dollars in disadvantaged communities. Currently, eligible car buyers can get $8,000 to $12,000 towards a new EV without scrapping an old vehicle and $9,000 to $16,500 towards a new EV with scrapping an old vehicle. With staff's proposed increases to incentives, eligible car buyers with incomes at or below 300 percent of the federal poverty level can now get $15,000 towards a new BEV or FCEV, and $12,500 towards a new PHEV without scrapping an old vehicle; or between $16,000 to $19,500 towards a new BEV, FCEV, or PHEV when scrapping an old vehicle. In addition to these stacked incentive totals, eligible applicants can receive charging incentives and also choose to go through the Financing Assistance program to obtain low-interest rate loans for the purchase of their vehicle. With staff's proposal to expand CVRP Rebate Now statewide, this provides the opportunity to apply all stacked incentives at the point of purchase. To put this into perspective, the average price of a new EV ranges from $40,000 to $60,000 and this stacked incentive amount could help cover about a third to half of the vehicle's cost before taking other federal and local EV incentives into account. Table 8 andTable 9 illustrate updated stacked incentive totals given staff's proposed increases to incentive amounts. Additional details about this proposal can be found in this chapter and in Appendix C of this Funding Plan.

Table 8: Updated Stacked Incentive Amounts for New Purchases W/O Scrap (CVRP + Financing Assistance, at 300% FPL or lower)

Vehicle Type	Stacked Incentive Total
BEV	$15,000
FCEV	$15,000
PHEV	$13,500

Table 9: Updated Stacked Incentive Amounts for New Purchases with Scrap (CVRP + CC4A, at 300% FPL or lower)

Vehicle Type	≤300% FPL	≤300% FPL & in Disadvantaged Communities
BEV	$17,500	$19,500
FCEV	$17,500	$19,500
PHEV	$16,000	$18,000

In addition to increased incentive amounts, staff is also proposing the inclusion of a $2,000 prepaid charging card incentive to be used at public charging stations for lower-income applicants in CVRP. Prepaid charging card incentives are currently offered through Clean Cars 4 All ($2,000) and Financing Assistance (currently $1,000) and this year staff is proposing an increase to a total of $2,000 in prepaid charging incentives in Financing Assistance to bring all three programs in alignment. With this proposal, consumers can stack CVRP charging incentives and Financing Assistance charging incentives for a total of up to $4,000 in charging incentives if they are purchasing a new EV without scrapping an older vehicle. Additionally, consumers can also stack CVRP charging incentives with CC4A charging incentives for a total of up to $4,000 in charging incentives if purchasing a new EV and scrapping an older vehicle. This stacked amount would help support charging at public stations for the first 2 years of EV ownership given CARB vehicle mileage assumptions of 14,885 miles for PHEVs and 14,400 miles for BEVs. This support could last beyond 2 years if the consumer drives less miles annually or has access to free charging through other means.

Background on ZEV Deployment Goals

CARB is using these light-duty vehicle investments to accelerate deployment of the cleanest feasible vehicle technologies to meet California's air quality, climate change, and petroleum reduction goals. These goals include deploying:

- 1 million ZEVs by 2023, as directed by SB 1275.
- 1.5 million ZEVs by 2025, as directed in Executive Order B-16-2012.
- At least 5 million ZEVs by 2030, as directed in Executive Order B-48-18.

In addition, these investments also support Executive Order N-79-20 which requires that, by 2035, all new cars and passenger trucks sold in California be ZEVs.

Clean Vehicle Rebate Project (CVRP)

Proposed General Fund Allocation–$0
Proposed Low Carbon Transportation Allocation–$0
CVRP received a substantial upfront allocation through the Budget Act of 2021 that is intended to support the project through FY 2023-24

Project Overview and Goals

CVRP offers vehicle rebates to eligible applicants on a first-come, first-serve basis for light-duty ZEVs, PHEVs-, and zero-emission motorcycles. The primary goal of CVRP has been to support mass deployment of ZEVs to help build a sustainable EV market. This is accomplished by providing consumer rebates to partially offset the higher initial cost of these advanced technologies. Over the years, CVRP has appropriately transitioned from a broad market incentive to an income-based incentive to ensure consumers that are not traditionally the first to buy newer technologies have ample support to make the transition. The program continues to see increasing demand from applicants in both middle and lower income levels. Per-vehicle rebate amounts are based on consumers' income and vehicle technology as shown in Table 10. Increased rebates for low-income applicants were introduced in 2016.

CVRP At A Glance…

- Over $1.1 billion invested
- About 32 percent of funding benefits priority communities
- 478,000+ plug-in electric vehicles funded
- 36,000+ increased rebates issued to low- and moderate-income consumers
- 46+ million gallons of fuel use avoided
- 6.7+ million tons of CO_2 equivalent (GHG emissions) reduced

Center for Sustainable Energy™

Data through June 30, 2022

In 2016, the Legislature passed SB 859 (Committee on Budget and Fiscal Review, Chapter 368, Statutes of 2015), which mandated a number of changes to CVRP, including:

- Increasing rebate amounts for low-income applicants with household incomes less than or equal to 300 percent of the federal poverty level to those shown in Table 10.
- Set the income cap.
- Limiting PHEV eligibility to vehicles with at least 20 miles of electric range.
- Requiring outreach to low-income consumers.
- Requiring prioritized rebate payments for low-income consumers.

CARB incorporated all these changes to CVRP as part of the FY 2016-17 Funding Plan. SB 615 (Cooper, Chapter 631, Statutes of 2017) extended these provisions through December 31, 2018. In addition, AB 2885 (Rodriguez, Chapter 366, Statutes of 2018) extended the requirements for CARB to continue providing outreach to low-income households and low-income communities and prioritize rebate payments to low-income applicants until January 1, 2022.

While these legislative requirements have sunset, staff proposes to maintain the following provisions for FY 2022-23:

- Limit participant eligibility based on income.
- Provide rebates for applicants who report gross annual income on Internal Revenue Service (IRS) Form 1040, IRS Form 1040A, or IRS Form 1040EZ, that does not exceed the limits as shown in **Error! Not a valid bookmark self-reference.**10.
- Provide increased rebates to eligible low-income applicants as shown in Table 10.

Table 10: CVRP Rebate Amounts and Income Limits

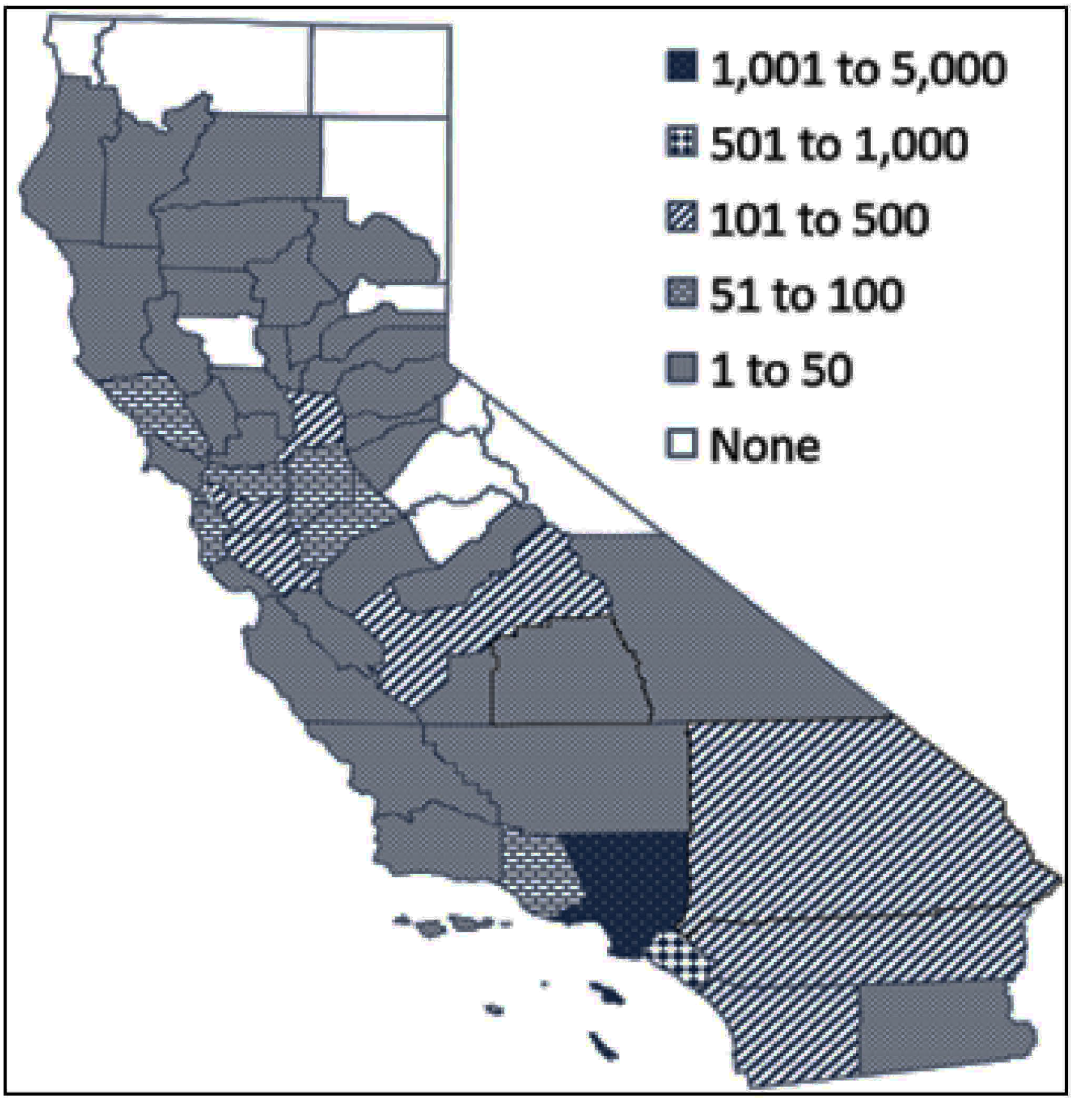
Rebate Type	FCEV	BEV	PHEV[49]	Zero-Emission Motorcycle
Increased Rebate for Low-Income Applicants Households with income less than or equal to 400% of federal poverty level	$7,000	$4,500	$3,500	$750
Standard Rebate Available for: Individual tax filers whose income is greater than 400% of the federal poverty level but less than or equal to $135,000 Head-of-household tax filers whose income is greater than 400% of the federal poverty level but less than or equal to $175,000 Joint tax filers whose income is greater than 400% of federal poverty level but less than or equal to $200,000	$4,500	$2,000	$1,000	$750
Above Income Cap Individual tax filers whose income is greater than $135,000 Head-of-household tax filers whose income is greater than $175,000 Joint tax filers whose income is greater than $200,000	$4,500	Not eligible	Not eligible	Not eligible

[49] With an all-electric range of at least 30 miles as determined by the United States Environmental Protection Agency.

Current Project Status

Through March 2022, CVRP has provided rebates for over 478,000 vehicles totaling over $1.1 billion since the project's launch in 2010. Since March 2016, over 36,000 increased rebates have been issued to low-income consumers totaling over $154 million. About 67 percent of rebates issued went to BEVs, about 31 percent to PHEVs, and about 2 percent to FCEVs and zero-emission motorcycles. Figure 4 is a heat map that illustrates the number of CVRP rebates issued by county through March 2022.

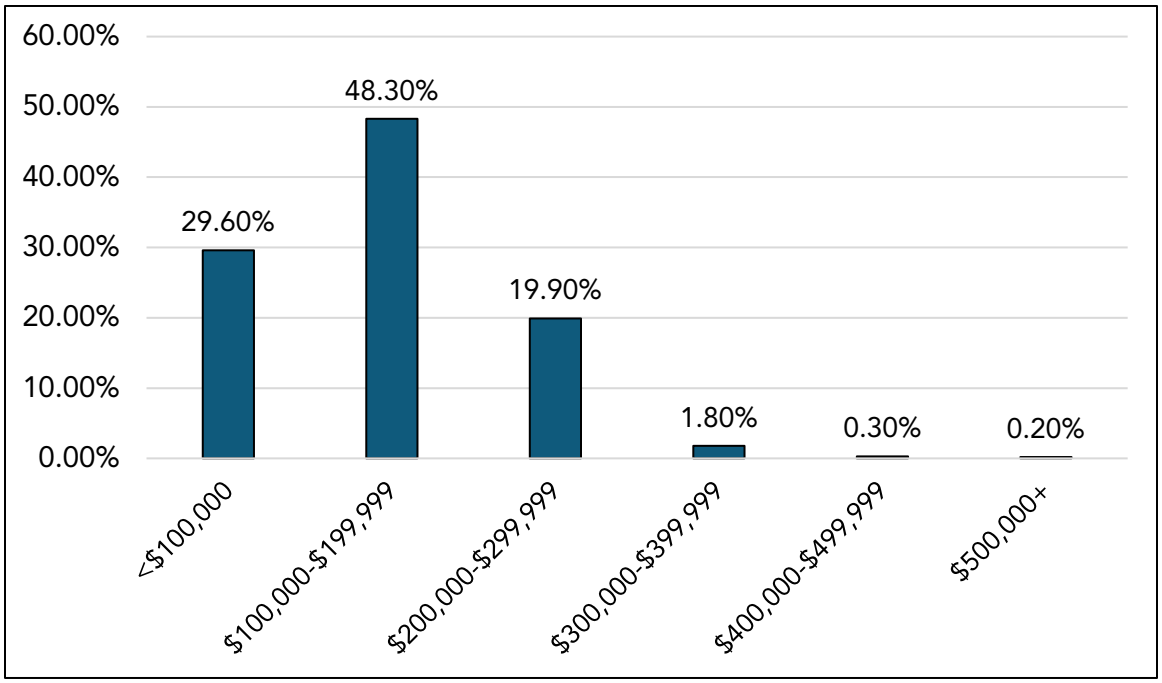
Figure 4: Map of CVRP Rebates Issued by County (through March 2022)



Since 2013, CVRP has issued voluntary participant surveys in order to obtain additional data about participants, their experience with the program, and to better understand EV adoption in California. As this is a voluntary survey, there is no guarantee that the responses received will statistically represent program participants as a whole. To address this, a weighting system was applied to appropriately amplify or attenuate responses. The raking method was

used to produce weights that make the results based upon the survey data representative of the program with respect to county, vehicle model, vehicle category, and whether the vehicle was purchased or leased.[50] The raking method was used to produce Figures 5-12 illustrate the current demographic makeup of CVRP participants based on data obtained through voluntary surveys that were fielded in 2017-20 and best represent program participation since the inclusion of income eligibility criteria. Staff will update this information once the current edition of the survey is done being fielded.

Figure 5: Annual Household Income – CVRP Consumer Survey Edition: 2017–2020 (n=30,566)



[50] Clean Vehicle Rebate Project Rebate Survey Dashboard. https://cleanvehiclerebate.org/en/rebate-survey-dashboard

Figure 6: Household Size – CVRP Consumer Survey Edition: 2017–2020 (n=30,566)

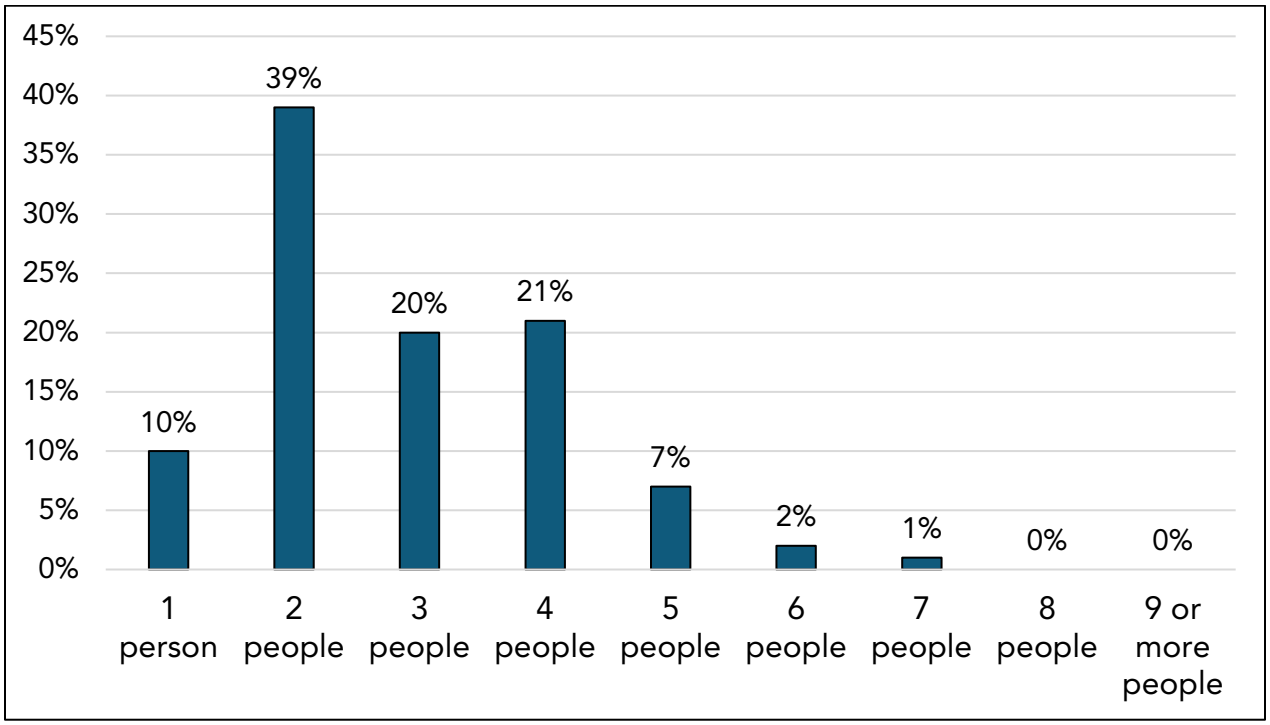


Figure 7: Education Level – CVRP Consumer Survey Edition: 2017–2020 (n=30,566)

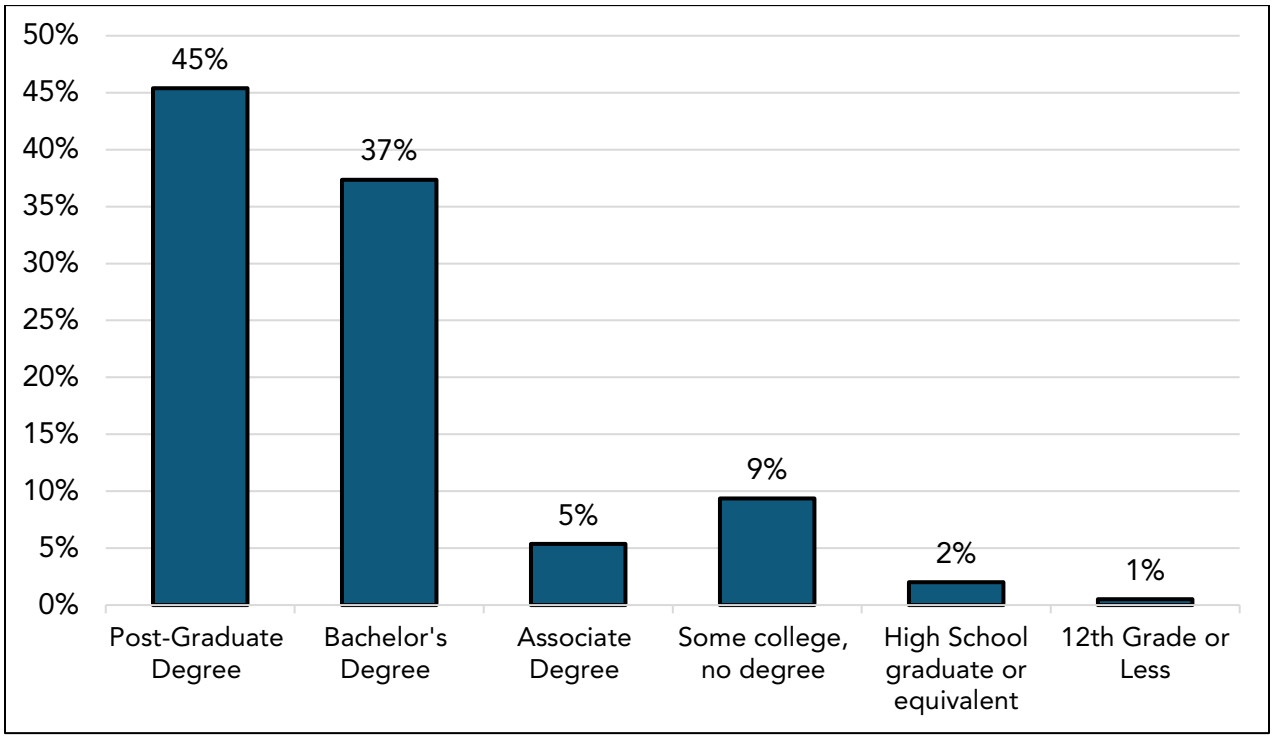


Figure 8: Housing Type – CVRP Consumer Survey Edition: 2017–2020 (n=30,566)

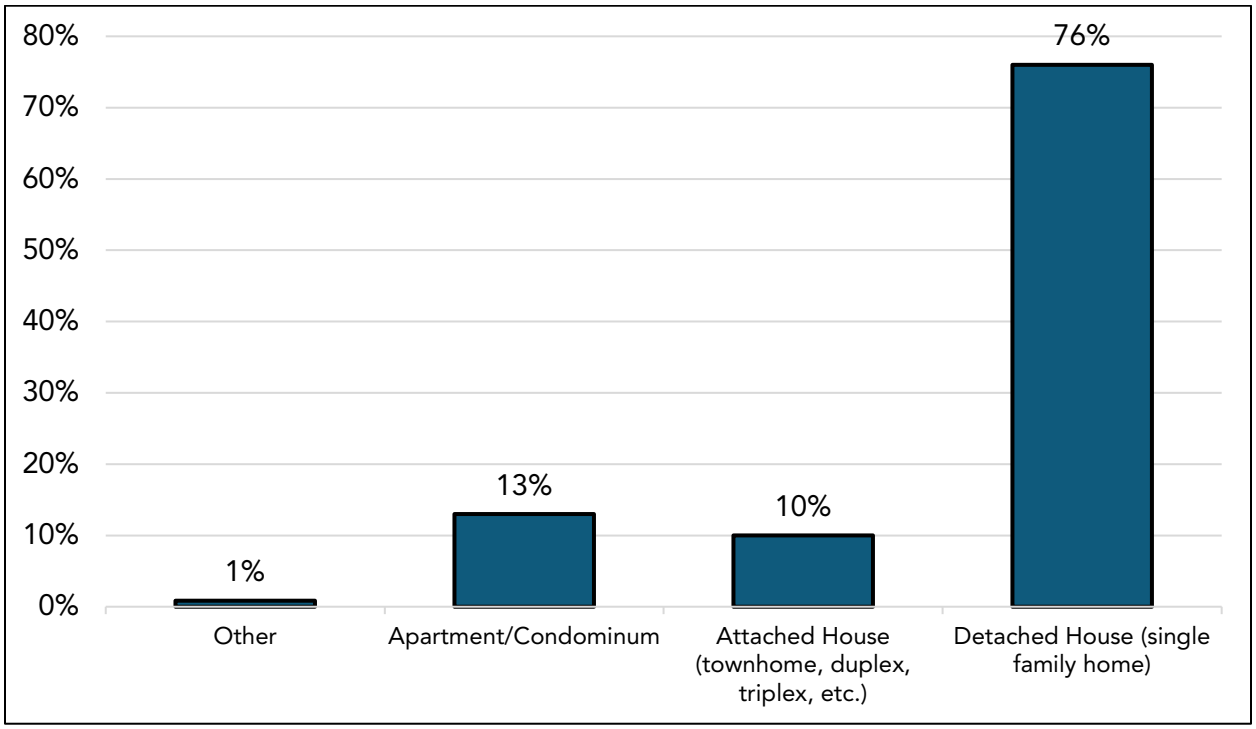


Figure 9: Housing Ownership – CVRP Consumer Survey Edition: 2017–2020 (n=30,566)

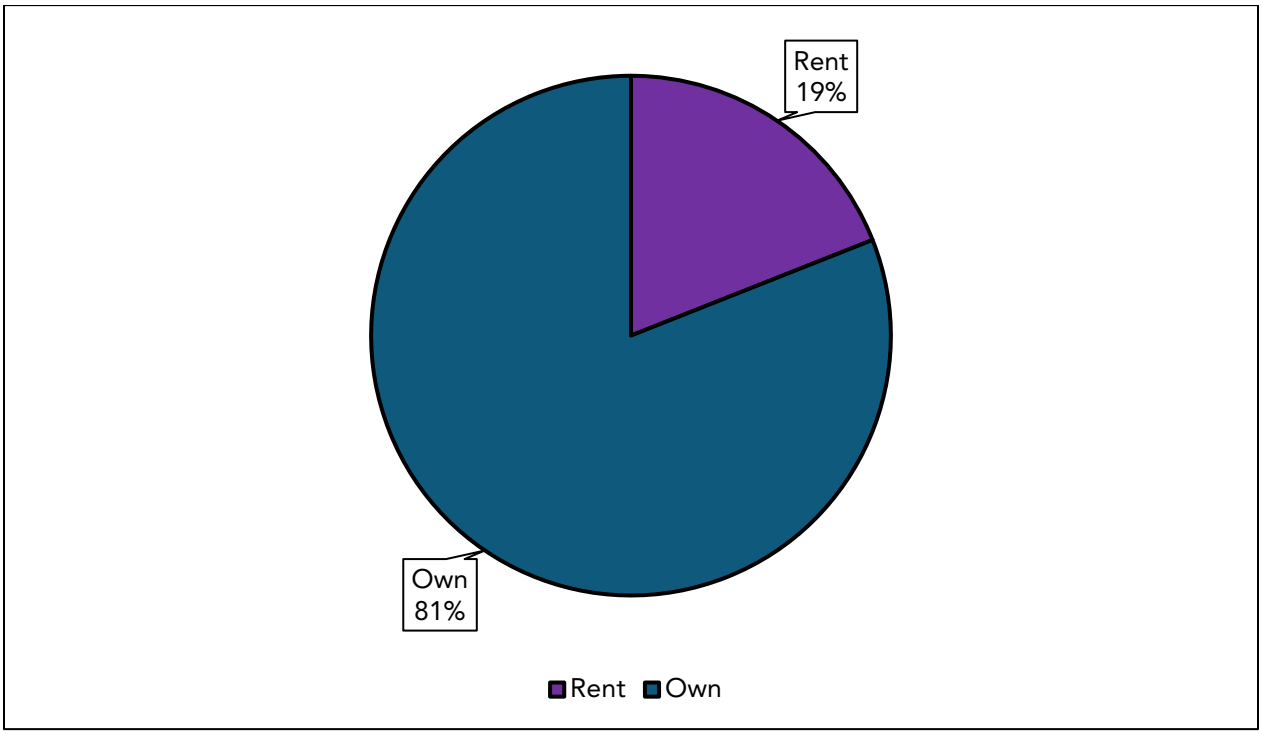


Figure 10: Gender – CVRP Consumer Survey Edition: 2017–2020 (n=30,566)

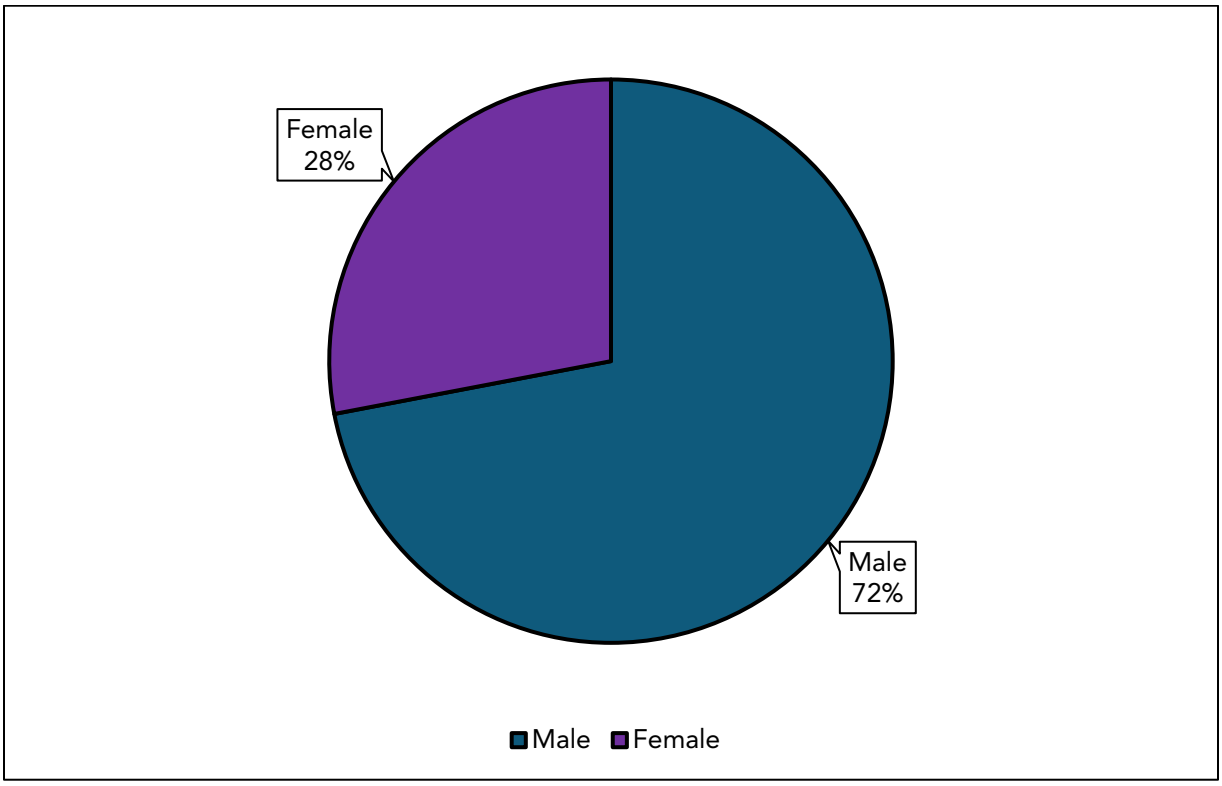


Figure 11: Age – CVRP Consumer Survey Edition: 2017–2020 (n=30,566)

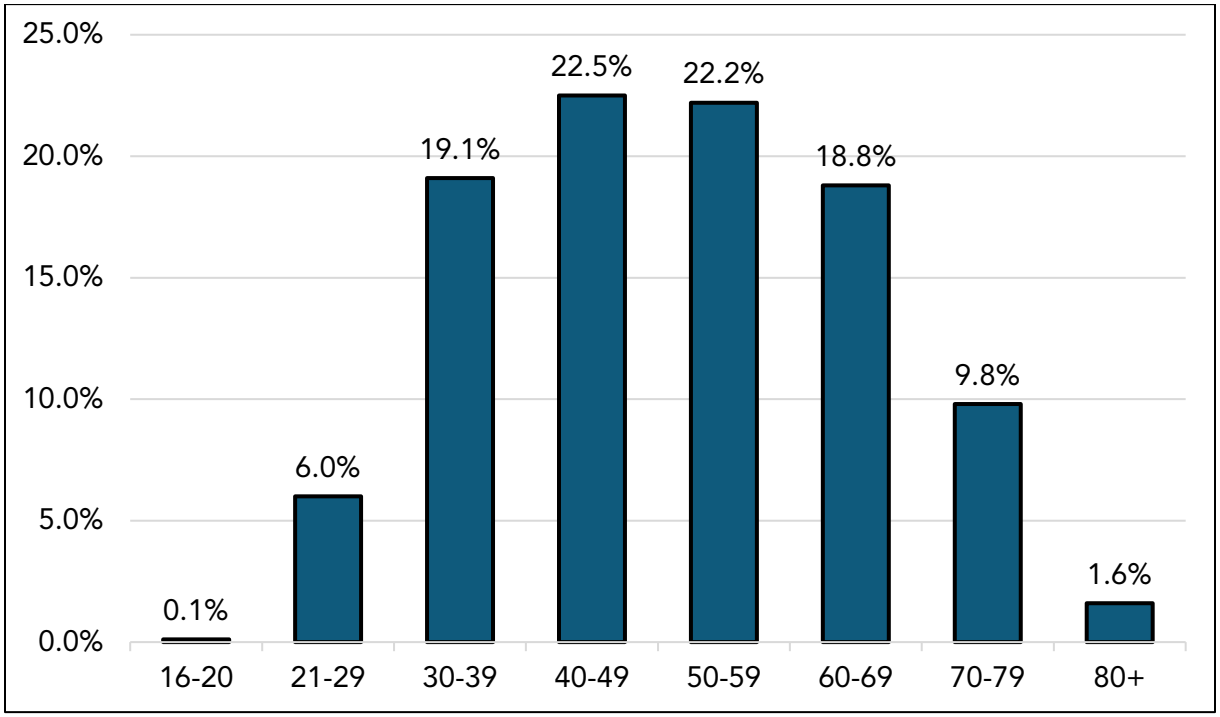
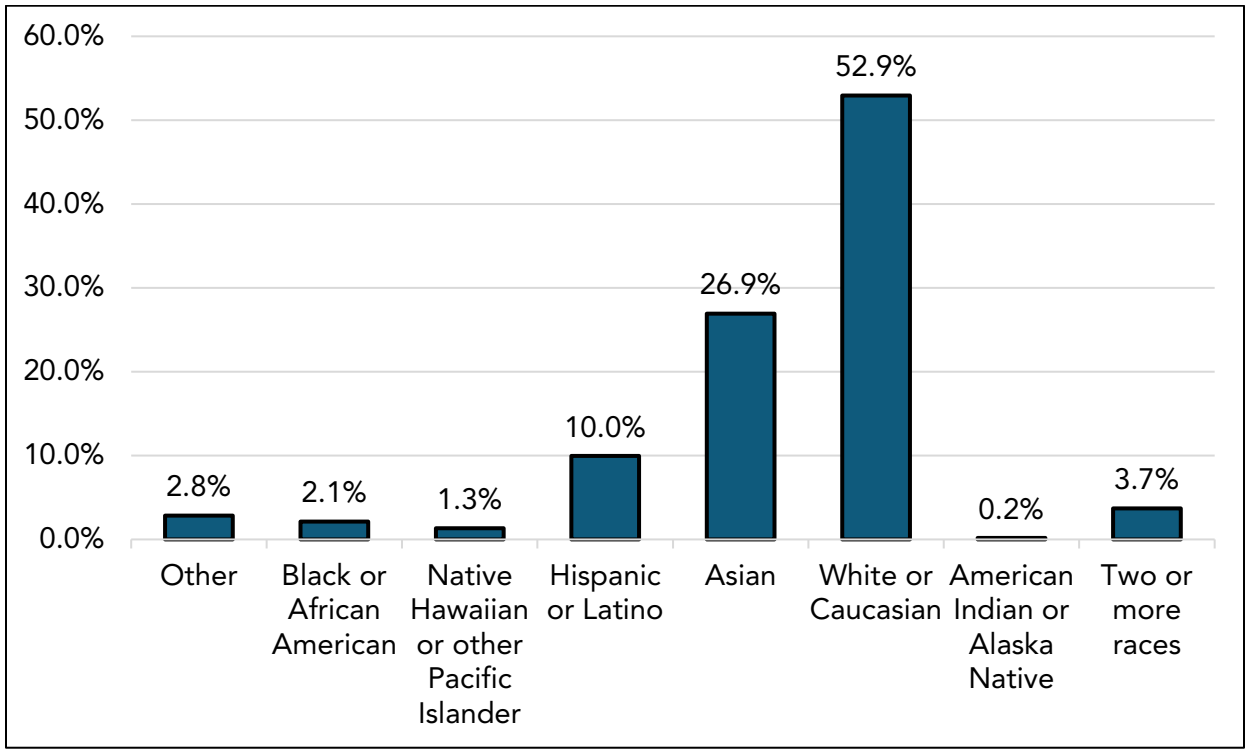


Figure 12: Race/Ethnicity – CVRP Consumer Survey Edition: 2017–2020 (n=30,566)



In FY 2021-22, CVRP received a total allocation of $525 million with $10 million of the allocation earmarked for the creation of an e-bike incentive program and $515 million for CVRP with the intent to fund the program through the 2023-24 FY. This funding allocation also included a requirement for CARB to provide a plan to phase down the rebate based on ZEV sales numbers.

In November 2021, the Board approved a plan to phase in changes to CVRP, proposed in the FY 2021-22 Funding Plan. The plan outlined two sets of changes to be triggered once certain ZEV sales milestones were reached – 1 million and 1.25 million ZEVs sold in California. A detailed explanation of these changes can be found in the FY 2021-22 Funding Plan for Clean Transportation Incentives.[51]

The CVRP administrator, the Center for Sustainable Energy (CSE), implemented the first phase of these changes on February 24, 2022. This first phase of changes included a decrease in the income cap for standard rebates and a decrease in the MSRP cap to $45,000 for smaller vehicle classes. A second phase of changes is tentatively slated to go into effect in February 2023, triggered by having 1.25 million EV sales in California. This second phase of changes includes a second reduction in the income cap for standard rebate eligibility, removal of PHEVs from CVRP eligibility, and a modest reduction in the rebate amount across the board. In the approved proposal, the Board directed staff to continue analyzing the ZEV market and to update CVRP funding need projections to determine if this second phase of

[51] California Air Resources Board. *Proposed Fiscal Year 2021-22 Funding Plan for Clean Transportation Incentives.* November 19, 2021. https://ww2.arb.ca.gov/sites/default/files/2021-10/fy21-22_fundingplan.pdf

changes is indeed necessary to keep the program open through FY 2023-24. Based on this analysis and with input from stakeholders through the public process, staff is providing an update with amendments to the plan in this Funding Plan.

Shortly after the first phase of changes were implemented, Tesla increased the base MSRP of the Model 3 and Model Y – two of the most popular EVs on the market – putting both vehicles over CVRP's MSRP cap and removing them from eligibility. Tesla vehicles' popularity and availability have made them to date the majority of all BEVs sold in California and an equally large share of CVRP rebates issued, though many other OEMs are now entering the market with affordable models. Due to the removal of the Tesla Model 3 and Model Y from CVRP eligibility, staff anticipate a significant near-term decrease in program demand in the coming months and anticipate a significant rebound in this demand as additional EV models enter the market. As this transpired fairly recently, staff is continuing to monitor program data to better reflect the impact this may have on future CVRP funding need. Additional project statistics are available on the CVRP website.[52]

Staff monitors CVRP participation rates by comparing rebate application data to California vehicle registration data to evaluate program trends. Historically, about 75 percent of ZEVs purchased or leased in California received a rebate prior to the introduction of income-based consumer eligibility. Since the introduction of the CVRP income cap and MSRP cap, slightly less than 50 percent of ZEVs purchased or leased in California have received a rebate. This suggests that the income cap and MSRP cap are having their intended effects. Staff will continue to monitor these trends as the first phase of program changes that went into effect in 2022 may impact the percentage of the ZEV market that receives a CVRP rebate.

Terms and Conditions: When CVRP was established, CARB and the project administrator developed Terms and Conditions to highlight the policies set forth by the Board in more detail for consumers, and ensure a fair, equitable, and responsible project. More specifically, the Terms and Conditions are intended to notify consumers of the core requirements of the program prior to submitting an application. Additionally, CARB and the project administrator developed an Implementation Manual to further define these rules and define roles and responsibilities. The current Terms and conditions and Implementation Manual for CVRP are available at: https://cleanvehiclerebate.org/eng/eligibility-guidelines

These documents are incorporated into the Funding Plan by reference and updated periodically throughout the year to reflect project changes after the Board adopts each funding plan and as other changes are necessary to provide further clarity.

Solicitation: In previous years, CARB has held competitive solicitations for a CVRP administrator up to every three years as the program grant term came to a close. However, CVRP has experienced numerous disruptions over the last several years due to insufficient funding which has eroded consumer confidence in the program and limited the incentive opportunities available for EVs. These disruptions would be magnified by re-soliciting for a program administrator as the process takes months to complete. This in turn leads to delayed program reopening, increased rebate processing times, and prolonged waitlists.

[52] CVRP Rebate Statistics, https://cleanvehiclerebate.org/eng/rebate-statistics

CVRP is a critical, high priority, ongoing incentive program with an existing administrator in place who is prepared to implement new funding quickly to avoid further disruptions. It should also be noted that CSE has been the only entity that has applied in the two previous CVRP solicitations (FY 2014-15 and FY 2016-17). For these reasons, CARB staff is proposing not holding a new solicitation until new funding is allocated to the program. While prior grants have been structured off the FY 2016-17 solicitation, staff is proposing to add in additional flexibility with the percentage of rebate processing fees provided to the administrator given the recent and proposed changes to the program.

Proposed Funding Allocation

As previously mentioned, CVRP received a substantial upfront allocation of $515 million through the Budget Act of 2021. This allocation is intended to fund CVRP through FY 2023-24 and therefore no additional funding is being allocated to the program this FY. Instead, staff will use the FY 2022-23 Funding Plan to provide updated CVRP funding projections and recommended amendments to the plan of phased in changes approved by the Board in November 2021.

CVRP Demand Projections: In mid-May 2022, staff worked with CSE to release updated preliminary projections that included recent EV sales numbers and program data through Quarter 1 of 2022.[53] Staff have modeled projections for both standard and increased rebate funding need and have reflected the recent removal of Tesla's Model 3 and Model Y from program eligibility. This presentation also included a brief update on California's ZEV market. Based on updated data, staff estimates that California is well on track to meeting its next two ZEV deployment goals with 1.5 million ZEVs by 2025 and 5 million ZEVs by 2030.

The methodology used is the same as last year with CSE using Prophet, an open-source modeling tool. Prophet helps to better simulate market conditions and rebate demand based on estimates of market recovery following last year's economic uncertainty. The projections include estimates of the impact of the Clean Fuel Reward, February 2022 program changes, and removal of all Tesla vehicles from CVRP. Additionally, the projections adjust for the large increase in EV sales due to the release of the Tesla Model 3 in 2018 and pent-up market demand in Winter 2020-21. Lastly, the projections assume linear growth for most vehicle categories and rebate types but does not account for future ZEV model releases or changes to state and federal incentives or regulations.

Based on updated projections, the February 2022 reduction in the income cap is projected to result in an approximately 23 percent reduction in applications. Additionally, the removal of the Tesla Model 3 and Model Y from eligibility is anticipated to result in an overall reduction in program demand by about 60 percent. Tesla's MSRP ineligibility is predicted to gradually reduce demand from March 2022 through August 2022 with the income cap reduction expected to uniformly reduce demand starting in April 2022 with the income cap reduction expected to uniformly reduce demand from March 2022 and onward and onward. Staff is

[53] California Air Resources Board. *First Public Work Group to Discuss the Clean Vehicle Rebate Project for Fiscal Year 2022-23.* May 11, 2022. https://ww2.arb.ca.gov/sites/default/files/2022-05/final_cvrp_workgrouppresentation_05112022_ada.pdf

continuing to monitor program data and will provide updates pertaining to the impacts of Tesla's ineligibility and a reduced income cap in future funding plans.

Table 11 shows updated CVRP funding demand estimates through FY 2024-25. As the projections do not include future ZEV model releases or changes to state or federal incentives and regulations, staff have noted that the total estimated demand is only a partial total of what staff anticipates is needed to keep CVRP open through June 2024. Currently, there are over 60 ZEV and PHEV models available in California spanning across ten EPA vehicle size classes.[54] However, a recent CARB analysis indicates that this total will rapidly increase over the next few years to nearly 180 ZEV and PHEV models across an increasing number of EPA vehicle size classes by 2025.[55] This rapid expansion and diversification of the ZEV market is expected to significantly increase CVRP demand particularly as more ZEV offerings in the highly popular van, truck, and SUV categories come to market. As such, CARB staff will continue to work with the CVRP administrator to update program demand projections with the newest ZEV market and CVRP rebate data available to better reflect the impact of these changes on future funding demand for CVRP.

Table 11: Updated CVRP Demand Estimates through FY 2024-25 (with no changes) (millions)

Time Period	Standard Rebates	Low-Income Rebates	Partial Estimated Demand
June 2022-June 2024	$25-$235	$20-$97	$45-$332

Updated projections are publicly available on the CVRP and CARB websites and were discussed through the public process. CSE has future plans to incorporate refinements to the projections that include adjusting for upcoming EV model releases, seasonality, and regional forecasting. A detailed explanation of CVRP projection methodology can be found in Appendix C of this Funding Plan.

Proposed Changes to Project Criteria

As previously mentioned, updated projections that reflect February 2022 program changes and Tesla's recent ineligibility for the program indicate that while these two circumstances impact CVRP demand, they have minimal impact on the EV market as a whole. This indicates that the first wave of EV adopters is well-established and allows CVRP to pivot its focus to lower- and middle-income car buyers who need additional support to make the switch to electric.

[54] California Air Resources Board. *Advanced Clean Cars II Regulation Staff Report: Initial Statement of Reasons Appendix G ACC II ZEV Technology Assessment.* April 12, 2022. https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/accii/appg.pdf.
[55] Ibid.

To increase support for low- and middle-income car buyers and maintain support for upcoming ZEV model releases, staff is proposing amendments to last year's plan of phased-in changes which include:

- **Removal of PHEVs from CVRP eligibility by January 1, 2025:** As directed by the Legislature in the Budget Act of 2022, staff plans to remove PHEVs as an eligible vehicle type in CVRP by January 1, 2025. While this was initially part of staff's proposal for phase out in 2023, the Legislature expressed support in the 2022 Budget Act for PHEVs to remain eligible until January 1, 2025. As this change is now planned for a later date, staff will provide updates on the anticipated impact this change will have on CVRP in future Funding Plans.
- **Reconsidering implementation of a second decrease to the income cap for standard rebate eligibility and a modest decrease in rebate amounts planned for implementation in February 2023:** In last year's approved plan, a second set of phased-in changes for CVRP was tentatively slated to go into effect in February 2023. This second set of changes included a second decrease to the income cap for standard rebate eligibility and a modest decrease in rebate amounts across the board. Over the past eight months, staff has continued analyzing program and ZEV market data and met with stakeholders to determine if these changes were still needed to keep the program open through FY 2023-24. As updated projections indicate, there is an expected surplus of funding at the end of FY 2023-24 given current program design and the ineligibility of Tesla Model 3 and Model Y vehicles. As such, staff does not believe these changes, which were proposed in FY 2021-22, are warranted in the program at this time and is proposing to defer implementation.
- **Including a $2,000 pre-paid charge card with every low- and moderate-income increased rebate issued:** Currently, charging incentives are offered through Clean Cars 4 All and Financing Assistance but have yet to be introduced into CVRP. These charging incentives are in place to help address the barrier of electric vehicle charging access experienced by many low- and moderate-income program participants. Recent survey data indicates that the availability of charging infrastructure is still a top barrier to EV adoption for many individuals. In an effort to continue addressing this barrier and aligning with both Financing Assistance and Clean Cars 4 All, staff is proposing to include charging incentives for low- and moderate-income participants in CVRP. Staff analyzed what the average cost to charge an EV is annually and the results of the analysis indicated an average cost of about $2,000. Additional details of this analysis can be found in Appendix C of this Funding Plan. By July 2023, CVRP would include a $2,000 pre-paid charge card with every Increased Rebate issued that will be valid at public charging stations or alternative charge card options. Increased Rebate applicants would be able to stack this charging incentive with any other charging incentives they are eligible for. This change is expected to have a low impact on funding demand, however, as this is a new addition to CVRP, it is unknown how providing charging incentives to increased rebate participants will impact program participation. Currently, Financing Assistance provides up to $2,000 for the installation of a Level 2 charging station or a $1,000 prepaid charge card plus a portable charger,

however, staff is proposing to increase the prepaid charge card amount to $2,000 in this funding plan to align with all programs. CC4A offers up to $2,000 for the installation of a Level 2 charger or up to $2,000 in prepaid charging credit. With this proposal, consumers can stack CVRP charging incentives and Financing Assistance charging incentives for a total of up to $4,000 in charging incentives if they are purchasing a new EV without scrapping an older vehicle. Additionally, consumers can also stack CVRP charging incentives with CC4A charging incentives for a total of up to $4,000 in charging incentives if purchasing a new EV and scrapping an older vehicle. This would help support charging at public stations for the first 2 years of EV ownership given CARB vehicle mileage assumptions of 14,885 miles for PHEVs and 14,400 miles for BEVs. This support could last beyond 2 years if the consumer drives less miles annually or has access to free charging through other means.

- **Increasing the rebate amount for low- and moderate-income consumers by $3,000:** As noted earlier in the introduction for Chapter 3, inflation and rising interest rates combined with continued vehicle supply issues has led to soaring costs for both new and used vehicles. A recent analysis indicates the average price for an EV skyrocketed to $63,821 by December 2021 while the average price of an ICEV was about $47,000 – a difference of nearly $17,000.[56] Additionally, the purchase price of vehicles receiving a CVRP increased rebate have increased from about $29,000 in 2016 to about $43,000 at the end of 2021 – an increase of about $14,000. Staff also recognizes that some lower-income consumers may not have a high enough taxable income to take advantage of the full Federal EV Tax Credit which helps offset costs of a new EV. To help bridge the gap between a new EV and new ICEV and to continue encouraging EV adoption by all Californians, staff is proposing an increase of $3,000 to CVRP increased rebate amounts for PHEVs and BEVs and an increase of $500 for FCEVs. The proposed change would go into effect in February 2023 and would raise the PHEV rebate from $3,500 to $6,500 and the BEV rebate amount from $4,500 to $7,500. The FCEV rebate amount would increase slightly from $7,000 to $7,500 and would bring incentive amounts for BEVs and FCEVs in alignment similar to the structure seen in Financing Assistance and Clean Cars 4 All. Table 12 illustrates current and proposed increased rebate amounts by vehicle technology type. The effect of this program change would have a moderate impact on program funding and participation since estimates are based on current low- to moderate-income rebate levels, which are atypically low due to Tesla's program ineligibility. Further, the proposed increase for CVRP increased rebates may be underestimated as the new amounts may pass a tipping point leading to a higher demand than originally anticipated. CVRP increased rebates would continue to stack with other CARB vehicle purchase incentives in addition to other available EV incentives. A detailed analysis of CARB clean vehicle purchase incentive funding levels, including updated stacked incentive totals, can be found in Appendix C of this Funding Plan.

[56] Osaka, Shannon. Grist. *Batteries are getting cheap. So why aren't electric vehicles?* April 27, 2022. https://grist.org/article/batteries-are-getting-cheap-so-why-arent-electric-vehicles/

Table 12: Current and Proposed Amounts for CVRP Increased Rebates

Vehicle Technology Type	Current CVRP Increased Rebate Amount	Proposed CVRP Increased Rebate Amount
PHEV	$3,500	$6,500
BEV	$4,500	$7,500
FCEV	$7,000	$7,500

- **Expanding CVRP Rebate Now, the pre-qualification pilot, statewide for low- and moderate-income consumers:** Currently, Rebate Now is available in participating San Diego and San Joaquin Valley dealerships, but the proposal would open Rebate Now to all of California starting in July 2023. A later implementation date is proposed for CVRP Rebate Now statewide expansion in order to ensure a sufficient number of participating dealers are enrolled, to refine and improve the CVRP Rebate Now process, and to provide additional outreach prior to launch. Staff will provide updates on this expansion through the public process and will work with stakeholders to improve implementation before launching statewide. While not directly adjusting the rebate amount, the impact of this change would allow applicants to receive their rebate amount directly and apply it towards the purchase price of their vehicles. For those who are financing their vehicle, the direct rebate may lower the principal on their loan which would allow them to pay a lower price for an EV. Staff believes that this policy would allow for more increased rebate applicants without increasing the direct rebate amount.

Staff anticipates that these proposed changes will be implemented in 2023. These proposed changes are projected to increase funding demand by $46 million and increase rebates by roughly 1,500 through June 2025. While this is a modest increase in program demand, staff believes that these changes address ongoing stakeholder concerns about funding levels and increase access to EVs to lower income Californians. Again, this does not factor in upcoming EV model releases which we expect there to be many over the next few years. Staff will work with CSE to update these projections as new rebate and ZEV market data becomes available and present updated projections through the public process and in next year's funding plan. A complete analysis of the impacts of these program adjustments and a summary of the CVRP projection methodology can be found in Appendix C of this Funding Plan.

Project Evaluation and Outcomes

Although no specific set aside for increased rebates for low-income consumers was mentioned in the Budget Act of 2021, last year staff estimated that at least 50 percent of the FY 2021-22 CVRP funding allocation would be used for increased rebates and the remainder used for standard and fleet rebates. Staff is updating this estimate based on the changes

proposed over the next year that aim to narrow the program's focus to middle- and lower-income EV buyers. With this framing, staff estimate that half of the remaining $334 million in CVRP funding, or $167 million, will be used for standard rebates which would fund about 75,946 rebates and provide over 584,000 million metric tons of CO2 equivalent GHG emission reductions. The funding would also provide about 37 tons of nitrogen oxides (NOx), 26 tons of fine particulate matter (PM 2.5), and 7 tons of reactive organic gas (ROG) emission reductions.

Staff estimated that the remaining $257.5 million of the allocation used for increased rebates for low-income consumers would fund about 57,000 rebates and provide 431,000 metric tons of CO2 equivalent GHG emission reductions. The allocation would also provide about 28 tons of NOx, 20 tons of PM 2.5, and 6 tons of ROG emission reductions. After the funding is expended, CARB will report on the actual number of rebates issued, emission reductions achieved, and disadvantaged community benefits as part of future Annual Reports to the Legislature on California Climate Investments.

The EV market is continuing to grow dynamically. Although it is still early in the EV market's development, there is a clear need to evaluate the effectiveness of investments toward CVRP and other light-duty vehicle purchase incentives. Staff provided a major update to the Three-Year Plan for CVRP, the EV Market, Clean Transportation Equity Investments, and Outreach in Appendix C of this year's Funding Plan. The update to the long-term plan covers FYs 2022-23, 2023-24, and 2024-25. This includes an updated review of market and technology indicators and a determination of if and when additional changes need to be made to CARB's light-duty vehicle purchase incentives. These indicators include but are not limited to: EV sales as a fraction of the new car market; technology advancement such as vehicle range; battery cost and vehicle price; vehicle diversity and number of manufacturers producing EVs; growth of the used EV market; and consumer awareness about EVs.

As part of the Supplemental Report of the 2018-19 Budget Act, CARB is required to submit an annual supplemental report, until January 1, 2030, that includes a forecast of the total state rebate investment necessary to reach the goal of placing at least 5 million EVs in service on California's roads. Development of the first report occurred alongside the development of the update to the long-term plan for CVRP and light-duty incentives in FY 2019-20. The first report was provided in the FY 2019-20 Funding Plan as part of Appendix C and will be updated and included in Appendix C of the Funding Plan annually thereafter until 2030.

Staff has developed the next long-term plan to further evaluate the effectiveness of CVRP by looking at the impacts the program has on California's ZEV market. Currently, the CVRP consumer survey provides data that helps analyze market impacts through demographics of program participants and importance of CVRP and other EV incentives. In previous long-term plans, staff indicated that a 16-20 percent EV market share would define a sustainable market. Aside from market share statistics, staff identified metrics to track the progress toward EV market sustainability, which would signal a phase-out of broad market incentives. These metrics include:

- ZEV sales numbers.
- Diversity in available models.

- Consumer education and awareness.
- Battery and vehicle cost.
- Importance and impact of federal policies.

Staff plans to continue work with stakeholders through the public process to determine if there are additional metrics that can help measure the progress toward EV market sustainability. Additionally, staff will continue working with stakeholders to identify goal markers for each of these metrics, and ensure the metrics are responsive to the recommendations in the CARB Audit Report. This will help with the development of a plan to phase out standard rebates once market sustainability is reached and turn CVRP's main focus to harder to reach market segments through increased rebates.

Finally, staff continue to conduct surveys of program participants to understand the importance of the rebate in relationship with other vehicle purchase incentives. Staff use this data to help understand potential behavioral impacts of the incentive and consider potential changes to the program. Survey data for CVRP is publicly available on the CVRP website[57].

AB 1550 Disadvantaged Community and Low-Income Household/Community Benefits: CVRP will continue to be implemented on a first-come, first-served, statewide basis, so it is not possible to estimate in advance exactly how much funding will be spent in and benefit disadvantaged communities, low-income communities, and low-income households. From January 1, 2021 through December 31, 2021, 27 percent of CVRP funding went to applicants in disadvantaged communities and 14 percent went to applicants living in low-income communities and low-income households that don't overlap with disadvantaged communities, for a total priority population benefit of 41 percent. CSA also recommended that CARB report the total percentage of funding that went to low-income households (including those that overlap with disadvantaged and low-income communities). 31 percent of CVRP funding went to low-income communities and households. As reported in the April 2022 Annual Report to the Legislature on California Climate Investments Using Cap-and-Trade auction proceeds, 43 percent of CVRP funding is now benefitting priority populations.[58] Further details are available on the CVRP website's rebate dashboard in a new Equity Stats tab focusing on equity metrics and AB 1550 priority populations.

Staff expects that the AB 1550 benefits for the upcoming FYs should increase with the changes to increase the equity-focused components of CVRP. These include continued and increased higher rebates for low-income consumers, expansion of prequalification for lower-income consumers to use the rebate at the point of purchase, addition of charging incentives for lower-income applicants, and increased outreach for disadvantaged communities and low-income households, all of which should help low-income consumers make these purchases and focus available funding on harder to reach market segments.

[57] https://cleanvehiclerebate.org/en/rebate-survey-dashboard
[58] California Air Resources Board. *California Climate Investments: 2022 Annual Report*. April 2022. https://ww2.arb.ca.gov/sites/default/files/auction-proceeds/cci_annual_report_2022.pdf

Financing Assistance for Lower-Income Consumers (Financing Assistance)

Proposed Low Carbon Transportation Allocation–$66 million

Project Overview and Goals

The Financing Assistance is one of CARB's suite of equity projects that provides financial resources to help lower-income Californians purchase advanced clean vehicles. The project offers vehicle price buy-downs (grants) at the point-of-sale, guarantees fair financing through lower interest loans, and provides home charger incentives or portable chargers and prepaid charge cards where there are home charger installation barriers.

Financial education and advanced vehicle technology training are provided through the process to ensure consumer protection to increase the chance of successful loan repayments and ensure that participants make an informed decision on purchasing vehicles that appropriately meet their transportation needs. CARB provides loan loss reserve to mitigate risk of participating financial institutions and lenders.

There are 2 programs under this pilot project implementing two different models: a local, high-touch program and a first come, first serve statewide program. The Driving Clean Assistance Program administered by Community Housing Development Corporation (CHDC) is the local program that serves 12 counties in Northern California. The statewide CVA Program is administered by Beneficial State Foundation and provides incentives to consumers across the state. As approved in last year's Funding Plan, the 2 Financing Assistance pilot programs will be merged into one statewide project to better serve low-income consumers and consumers living in priority populations.

Financing Assistance At A Glance…

- Over $52 million invested
- 4,750+ clean vehicles funded
- 2,950+ EVSEs or charging options funded
- 20 percent invested in DACs, 40 percent in LMI, and 15 percent in both LMI and DACs
- 23,358 MTCO2e estimated GHG emissions reductions*
-

clean vehicle assistance program

CHDC DRIVING CLEAN ASSISTANCE PROGRAM

Data through June 30, 2022

**Data through November 30,*

Current Project Status

CHDC, a CBO, received about $7 million in grant funds to serve low-income residents living in the nine Bay Area counties, Yolo, Santa Cruz, and Sacramento counties. So far, CHDC has provided 342 grants, helped secure 200 low-interest rate loans, and issued 152 EV supply equipment (EVSE) grants to participants. All loans issued under this program have been under 8 percent interest and are further supported by a loan loss reserve account with participating financial partners.

CVA Program has been awarded $45 million and since inception, the program has provided 4,440 vehicle grants, 2,725 EVSE grants, and facilitated 3,639 low-interest vehicle purchase loans to program participants. Due to higher-than-expected demand, a reservation list was put into place on March 17, 2021, but soon reached its maximum capacity, and the program closed to new applicants on April 14, 2021. The program received $8 million of the contingency funding allocation from FY 2021-22 and is fulfilling the reservation list applications.

Table 13: Grantees from Disadvantaged and Low-Income Communities

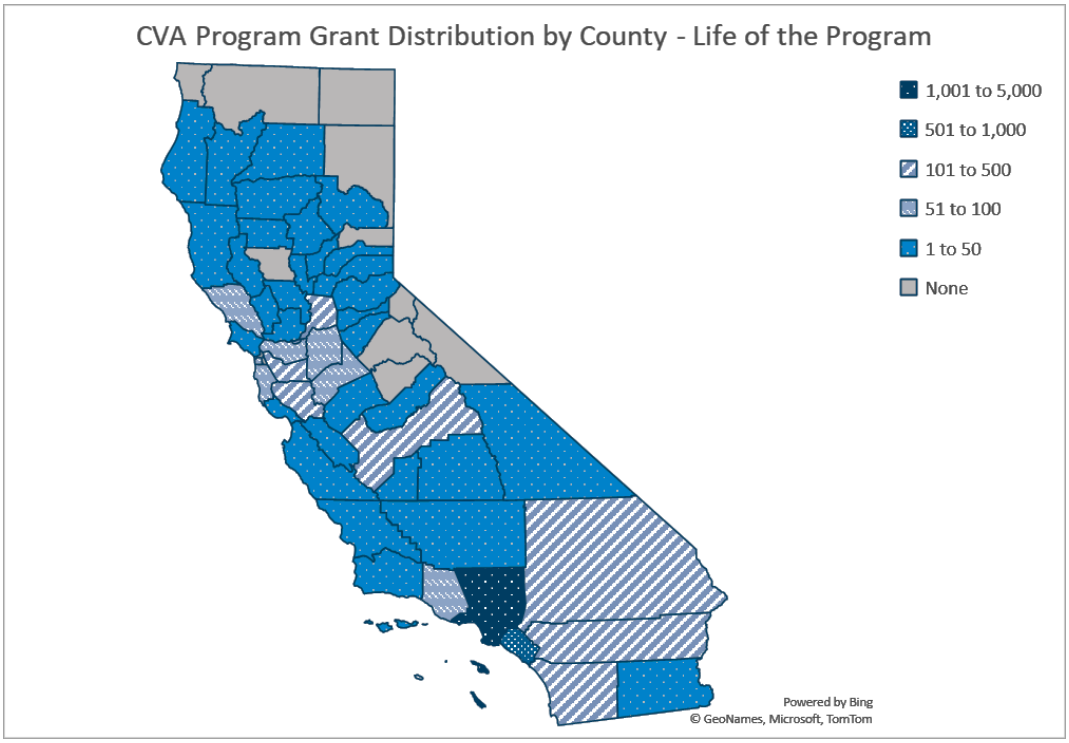
Community Type	Number of Grants	Percent of Total Grants	Average Household Income	Average Percent of Federal Poverty Level
Disadvantaged Community	863	19%	$38,777	193%
Low-Income	1761	40%	$37,803	193%
Total	681	15%	$37,575	189%

Table 14: CVA Program Distribution by Racie, Disadvantaged Community, and Low-Income Community*

CVA Program Participants' Race	Percentage of Total	Average Percent of Federal Poverty Level	Percentage Disadvantaged Community	Percentage Low-Income Community
American Indian or Alaska Native	2.16%	193%	23%	58%
Black or African American	5.37%	169%	32%	55%
East Asian	13.87%	218%	16%	35%
Hispanic or Latino	9.11%	216%	32%	53%
Middle Eastern or North African	4.35%	202%	16%	30%
Native Hawaiian/Pacific Islander	1.83%	219%	16%	40%
Southeast Asian	11.11%	226%	16%	44%
South Asian	4.39%	207%	14%	36%
White or Caucasian	36.98%	206%	14%	37%
More than one Race	9%	223%	21%	47%
Prefer not to Answer	11.76%	206%	19%	39%
Other	7.20%	205%	30%	49%

**This data only reflects CVA Program grantees who responded to either the "Adoption Survey" or the "Ownership Survey" and all duplicates have been removed. It does not reflect the total number of CVA Program grantees. Only 55.26 percent of the total number of CVA Program grantees responded to a survey. Also, some respondents identified with more than one race.*

Figure 13: Map of CVA Program Grants Issued by County



Needs-Based Approach

Based on the Board's approval of staff's proposal in the FY 2021-22 Funding Plan, the Financing Assistance program is transitioning to a needs-based model from the current first-come, first-served model to better meet the needs of low-income consumers.

In this model, applicants that meet one or more of the program's measurable criteria, such as income level, disadvantaged community residency, need for financial counseling, and others, would be automatically flagged as a priority applicant, triggering funds to be reserved. Appropriate support will be provided for each category to assist individuals throughout the application, vehicle purchase, and post-purchase stages. Applicants that do not meet one of the criteria identified but have an income less than the programs income eligibility cap, would be processed on more of a first-come, first-serve basis. Processing times would be longer, though these applicants won't likely need as much support. Funds for these applicants would not be reserved until applications are fully approved. Staff, however, continues to work with communities and stakeholders to define the approach for need-based incentives and the measurable criteria that will be used to identify priority applicants.

Staff recognizes that implementing a needs-based model is resource-intensive and entails collaboration and partnership with other programs such as Access Clean California, CBOs, and outreach partners. Therefore, staff is planning to allocate resources and utilize the unique capabilities of these stakeholders and invite them to play a more active role in program design and implementation.

Adopting a vehicle purchase price cap, loan amount cap, limiting the annual percentage rate of loans issued across the board to 8 percent, and expanding the partner banks network are some of the other program changes that were also approved by the Board last year and will be incorporated in the next phase of program implementation.

Terms and Conditions: As with CVRP, when this project was established, CARB and the project administrators developed Terms and Conditions to highlight the policies set forth by the Board in more detail for consumers, and to ensure a fair, equitable, and responsible project. More specifically, the Terms and Conditions are intended to notify consumers of the core requirements of the program prior to submitting an application. CARB and the project administrators developed an Implementation Manual, which includes the Terms and Conditions, to further define these rules, roles, and responsibilities.

The Implementation Manuals are linked on the websites for each program:

Statewide Project (Beneficial State Foundation): Clean Vehicle Assistance Program
https://cleanvehiclegrants.org/

Local Project (Community Housing Development Corporation):
https://communityhdc.org/dcap/

These documents are incorporated into the Funding Plan by reference and updated periodically throughout the year to reflect project changes after the Board adopts each funding plan and as other changes are necessary to provide further clarity.

Joint Solicitation with Clean Cars 4 All: In an effort to respond to consumer requests for streamlining clean vehicle purchase incentive programs and making it easier to apply for multiple programs, this year staff is planning to run a joint solicitation for Financing Assistance and statewide Clean Cars 4 All to select one grantee to administer these two major low-income vehicle purchase incentive programs. Staff believe that since Financing Assistance and Statewide Clean Cars 4 All have very similar application processes and serve the same segment of the market, it is an efficient approach to have one program administrator to manage both programs. A combined solicitation will allow for better management of communication across the programs, consolidated processing of rebate applications, cooperative relationships with dealers, more streamlined efforts and use of outreach tools and materials (when appropriate), and result in fewer administrators and risk of added complexity when working in partnership with Access Clean California. Program staff held several independent and joint work group meetings with stakeholders and generally received positive feedback to this approach. Some stakeholders indicated concerns around policy issues with statewide Clean Cars 4 All, and staff will continue to work through those issues in parallel to the solicitation process.

Proposed Funding Allocation

By implementing 2 programs under this pilot project for few years, CARB has learned that there is great demand and interest among low-income consumers for clean vehicles, such that the statewide program spent the 2 recent major allocations very quickly. Considering the recent health and economic crisis, program closures, and other external factors that impacted the demand, past project data analysis and modeling the needs-based model

suggest that the Financing Assistance project demand is between $80 million and $110 million for FY 2022-23.

Proposed Changes to Project Criteria

In addition to the changes approved by the Board in the FY 2021-22 Funding Plan, staff is proposing an increase of $2,500 to incentive levels, consistent with the broader proposal noted in the beginning of this chapter. Table 15 illustrates the current incentive amounts based on income tiers, and Table 16 provides the proposed amounts for Financing Assistance.

Table 15 : Current Financing Assistance Amounts and Income Tiers

Income Tier	PHEV	BEV	FCEV
Less than or equal to 300-400% Federal Poverty Level	$4,500	$5,000	$5,000
Less than or equal to 225-300% Federal Poverty Level	$4,500	$5,000	$5,000
Less than or equal to 225% Federal Poverty Level and below	$5,000	$5,000	$5,000

Table 16: Proposed Financing Assistance Amounts and Income Tiers

Income Tier	PHEV	BEV	FCEV
Less than or equal to 300% Federal Poverty Level and below	$7,000	$7,500	$7,500

Also, staff analyzed what the average cost to charge an EV is annually and the results of the analysis indicated an average cost of about $2,000. Additional details of this analysis can be found in Appendix C of this Funding Plan. Currently, Financing Assistance provides up to $2,000 for the installation of a Level 2 charging station or a $1,000 prepaid charge card plus a portable charger. Based on the results of this year's analysis, staff is proposing an increase in the amount offered for prepaid charge cards from $1,000 to $2,000. This amount would align with what is currently offered in CC4A and staff's proposal for prepaid charge cards for low-income applicants in CVRP. Eligible Financing Assistance applicants will still also receive a portable low speed charger if they choose the prepaid charge card option. With this proposal, consumers can stack CVRP charging incentives and Financing Assistance charging incentives for a total of up to $4,000 in charging incentives if they are purchasing a new EV without scrapping an older vehicle. This would help support charging at public stations for

the first 2 years of EV ownership given CARB vehicle mileage assumptions of 14,885 miles for PHEVs and 14,400 miles for BEVs. This support could last beyond 2 years if the consumer drives less miles annually or has access to free charging through other means. In order to retain the ability to modify incentive amounts, CARB staff requests the Board delegate authority to the Executive Officer to make changes to Financing Assistance incentive amounts.

It is important to note that throughout the public process of program development, staff routinely heard from representatives of African American communities that their respective communities have missed out on opportunities to benefit from our incentives in the past. Staff has worked closely with representatives of these communities to better understand their needs and how we can reduce barriers to our programs for all Californians. Staff propose enhanced targeted outreach and education for these communities in close collaboration with local CBOs and representatives to ensure low-income Californians in these communities have access to information and resources in par with other communities.

Project Evaluation and Outcomes

As staff transitions to implement a need-based model, staff will develop new metrics to measure the impact of incentives through this project. Currently, staff rely on program data and surveys of program participants to understand the impacts of the program on car buying, financing needs, and behavioral and socioeconomic impacts. An expected socioeconomic benefit of this project is to bring the benefits of clean transportation and access to low-interest auto loans to priority populations that are most impacted by pollution and who do not have a vehicle to scrap, which can be evaluated through measuring the number of clean vehicles purchased by low-income consumers and the number of loans facilitated by the program. Staff will also evaluate the importance of having access to low-interest loans during the process of purchasing a clean vehicle. Staff continues to find ways to collect and evaluate data in a way that helps to inform overall program design. The main measurable metric to evaluate program success are program participation and the number of clean vehicles purchased by low-income consumers. Staff is working to identify ways to collect and assess more data to better understand the impacts the program has on overall credit scores, and as the needs-based approach is implemented, staff will continue to refine program evaluation metrics.

Table 17: CARB Approach to Financing Assistance Socioeconomic Benefit Analysis

Benefit(s)	Metric(s)	Evaluation Method(s)	Data Source	Reportable Outcomes
Improved ability of low-income or disadvantaged community member to purchase a clean vehicle, using a low-interest loan, without having a vehicle to retire.	Number of cleaner vehicles purchased by low-income consumers, number of program participants that accessed a low interest loan through the program, and participant ratings through surveys regarding the importance of having access to low-interest loans.	Analyze program data and conduct participant surveys with questions about the importance of the incentive, and the importance of the program facilitating access to low-interest loans.	Program data and voluntary participant responses to user surveys.	Relative number of program participation and clean vehicles purchased by low-income consumers, and relative number and percentage of participants who self-report the importance of accessing low-interest loans through the program's support.

Staff estimates that the proposed $66 million allocation for the Financing Assistance would fund about 5,200 grants and provide nearly 45,000 metric tons of CO2 equivalent GHG emission reductions. The allocation would also provide 3.25 tons of NOx, 1.93 tons of PM 2.5, and 0.65 tons of ROG emission reductions.

By implementing this project under two pilot programs for several years at the state and local level, staff has collected program and survey data and gained insights on low-income consumers. Restructuring the two programs into one full-fledged, need-based statewide program, expanding participating partner banks and financial institutions, and rearranging the application process will help to better serve the low-income consumers and track socioeconomic benefits of this program.

Under the new program design, staff can better develop metrics to measure the impact of incentives. An expected socioeconomic benefit of this project is to bring the benefits of clean transportation to priority populations that are most impacted by pollution, which can be evaluated through measuring the increased number of clean vehicles in disadvantaged communities. The metric for measuring this benefit is the increased number of cleaner vehicles purchased by disadvantaged community residents. Other metrics to consider in evaluating the success of this project can be measuring increase in project demand, number

of program applicants, changes in participants' income level and residency location, costs and types of vehicles purchased, and loan repayment status. Improvement in participants' credit scores is another important metric that can be measured by evaluating the aggregate credit score of participants at the onset of the loan to their credit score over time, or through a modeling approach if credit score data cannot be obtained.

AB 1550 Disadvantaged Community and Low-Income Household/Community Benefits: This proposed funding will be available statewide, so it is not possible to estimate in advance exactly how much funding will be spent in and benefitting disadvantaged communities, low-income communities, and low-income households. However, based on the solicitations, program design, and existing program data, staff expects that much of this funding will be spent in and will benefit these communities and households. From December 1, 2019 through November 30, 2020, about 32 percent of Financing Assistance funding went to applicants in disadvantaged communities, and an additional 66 percent went to applicants living in low-income communities and low-income households that don't overlap with disadvantaged communities, for a total priority population benefit of 98 percent. CSA also recommended that CARB report the total percentage of funding that went to low-income households (including those that overlap with disadvantaged and low-income communities). 91 percent of Financing Assistance funding went to low-income households. As reported in the April 2021 Annual Report to the Legislature on California Climate Investments Using Cap-and-Trade auction proceeds, 98 percent of Financing Assistance funding is now benefitting priority populations.[59]

As part of the Cap-and-Trade auction proceeds reporting requirements, CARB will track where funds are spent and report the portion that meets AB 1550 investment criteria.

[59] California Air Resources Board. *California Climate Investments: 2020 Annual Report*. p. 51 April 2021. https://ww2.arb.ca.gov/sites/default/files/classic/cc/capandtrade/auctionproceeds/2021_cci_annual_report.pdf

Clean Cars 4 All

Proposed General Fund Allocation–$205 million
Proposed Low Carbon Transportation Allocation–$40 million

Project Overview and Goals

Clean Cars 4 All (formerly known as EFMP Plus-Up Pilot Project) provides incentives to help lower-income consumers living in priority populations to replace their old higher-polluting vehicles with newer and cleaner transportation. Participants have the option of a purchase or lease of a new or used hybrid, PHEV, or ZEV replacement vehicle, or an alternative mobility option such as an e-bike, voucher for public transit or a combination of clean transportation option. Additionally, buyers of PHEVs and BEVs are also eligible for home charger incentives or prepaid charge cards if home charger installation is not an option. Detailed information on the Clean Cars 4 All guidelines can be found here: https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/cc4apf.pdf

Clean Cars 4 All is currently administered in the five largest air districts in California: South Coast Air Quality Management District (AQMD), San Joaquin Valley Air Pollution Control District (APCD), Bay Area AQMD, Sacramento Metropolitan AQMD, with an upcoming program in San Diego APCD. Historically, participants in these programs must have a household income of less than 400 percent of the federal poverty level ($111,000 for a family of four) and live in a ZIP Code containing a disadvantaged community census tract.

Clean Cars 4 All At A Glance…

- Over $190 million invested
- 12,800+ clean vehicles funded
- 48 percent of funding benefits disadvantaged communities
- 102 tons of NOx reduced in or near disadvantaged communities
- 4 tons of PM2.5 reduced in or near disadvantaged communities

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT | CLEAN CARS 4 ALL

DRIVE CLEAN in the San Joaquin

CLEAN CARS FOR ALL

REPLACE YOUR RIDE

Data through March 31, 2022. Includes projects funded by Low Carbon Transportation, VW settlement, and AQIP funding.

Data through June 30, 2022

Annual goals are established through a public workgroup process after the FY 2022-23 Funding Plan is approved by the Board. In addition to monitoring overall participation rates, the number of vehicles funded by replacement vehicle technology type, and number of participants choosing the alternative mobility option are also tracked in consultation with implementing air districts.

CARB staff determines proposed district funding allocations based on quarterly report data from the participating air districts. These reports provide data such as fund balances and expenditure rates, which CARB uses to determine which districts are in the greatest need of additional project funds. Due to the atypical circumstances of the past two years that adversely affected program funding and performance, CARB staff has also taken additional steps in coordinating and meeting directly with districts. These meetings are opportunities for the districts to present additional metrics which include but are not limited to total applications, application processing capability, total program capacity, and any other metrics that are district program specific, that will illustrate each program's capabilities, demand, and difficulties. Staff factored these metrics from the districts into the allocation determination.

The metrics that the districts have brought forth are also included in the AB 630 Report, which sets forth specific and measurable goals annual for both EFMP Scrap Only and the Clean Cars 4 All Scrap-and-Replace programs and beginning with the FY 2022-23, the AB 630 Report is included as Appendix I in the Funding Plan.

In response to the 2021 CARB Audit Report, CARB is also developing metrics internally to better capture the socioeconomic benefits of the improved reliability of the replacement vehicle over the retired vehicle. Also at Board direction, with updated guidelines CARB staff continues to approve upon the metrics and refine the data we collect. Currently, there are efforts to refine the participant surveys administered throughout the Clean Cars 4 All process as well as surveying methodology to better gauge the program from the perspective of the applicants.

Current Project Status

Air District Programs

Since FY 2014-15, CARB has allocated $190.6 million for Clean Cars 4 All, including $177 million of Low Carbon Transportation funding, $10 million of VW settlement funding, and $3.6 million of AQIP funding. Table 18 below summarizes the funding allocated to each of the districts that have operational programs, including funding spent and vehicles replaced, to date. Additionally, in preparation for launch of the newest district program, San Diego APCD was allocated $5 million in FY 2021-22 as an initial grant to begin program implementation. Table 19 provides a breakdown of vehicles and other incentives funded by these programs.

Table 18: District Allocations (millions)

District	Launch Date	Dollars Allocated	Dollars Spent
South Coast AQMD	July 2015	$89	$62
San Joaquin Valley APCD	July 2015	$43.6	$27
Bay Area AQMD	September 2019	$32	$16
Sacramento Metropolitan AQMD	July 2020	$11	$5
San Diego APCD	T.B.A.	$5	$0
	Totals	**$180.6**	**$110**

Table 19: Vehicles Funded

District	Total Vehicles Replaced	BEV	PHEV	Hybrid	FCEV	Mobility Options	EVSE or Charge Card
South Coast AQMD	7,200	10 percent	58 percent	31 percent	27	11	19
San Joaquin Valley APCD	3,560	9 percent	52 percent	39 percent	0	0	6
Bay Area AQMD	1,620	24 percent	48 percent	26 percent	18	21	150
Sacramento Metropolitan AQMD	470	33 percent	66 percent	1 percent	0	0	227
Totals	**12,850**	-	-	-	**45**	**32**	**402**

In order to confirm eligibility, applicants to the Clean Cars 4 All program must provide documentations to demonstrate annual income and household size. This data also provides

valuable information regarding the program participation rates of different income levels and which technologies they are choosing. Figures 14-17 illustrate the program participation by income levels, household size, and the technology choices since the program began in 2015.

Figure 14: Federal Poverty Level

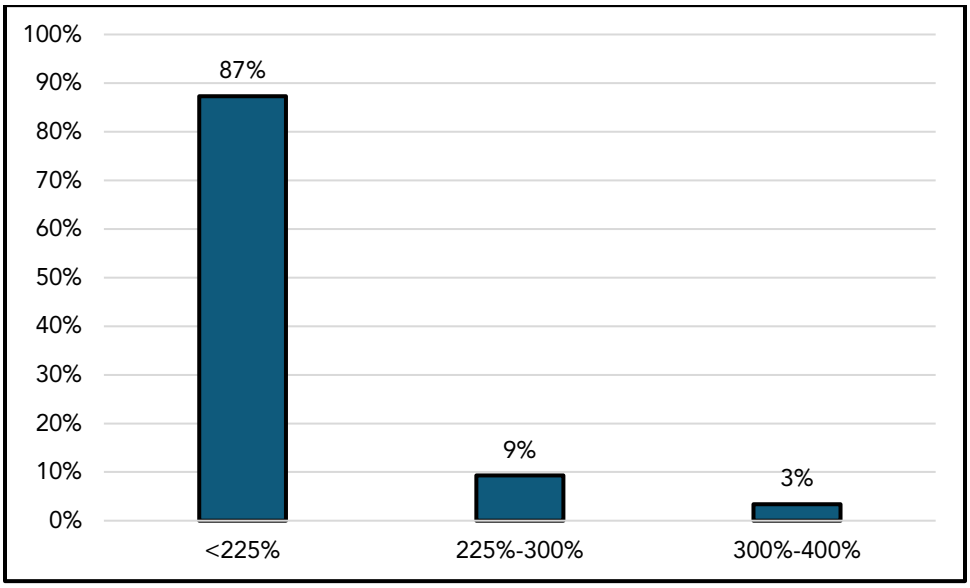


Figure 15: Household Income

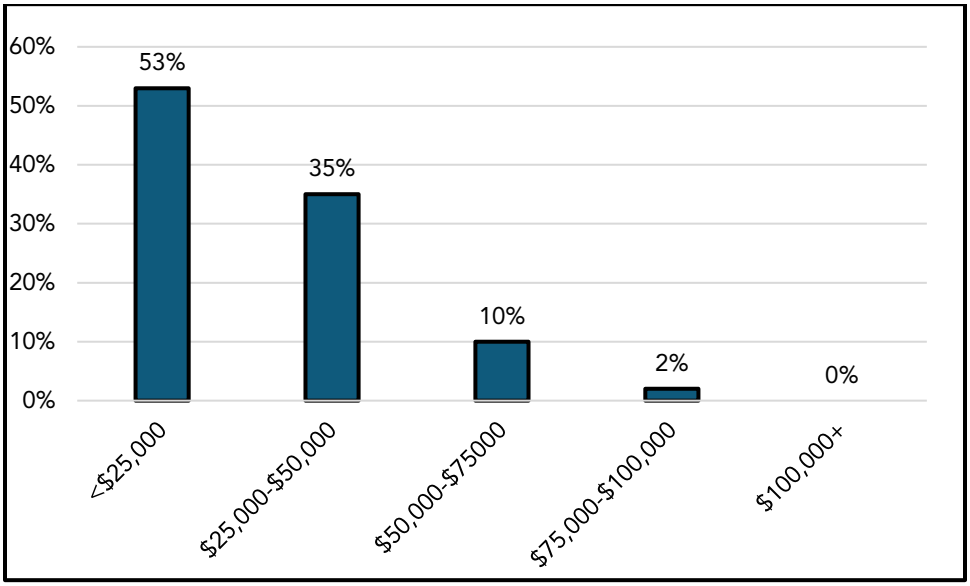


Figure 16 Household Size

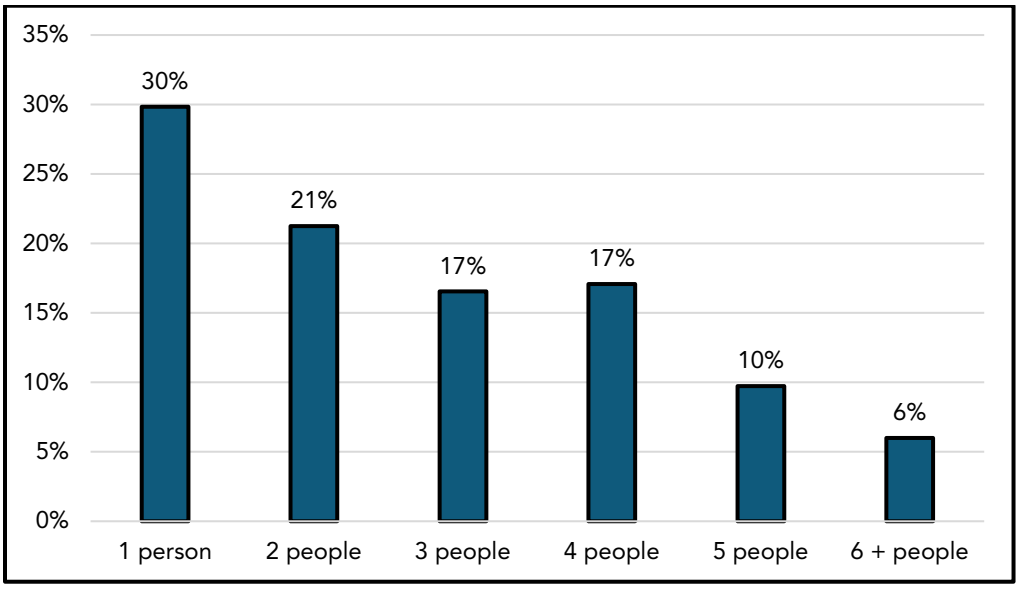
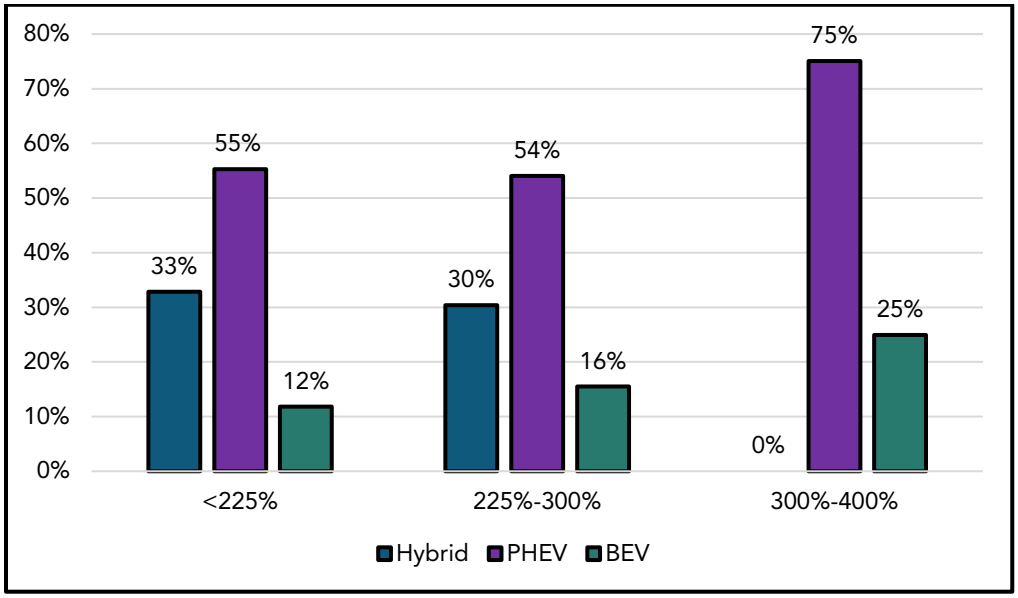


Figure 17: Federal Poverty Level and Technology Type Chosen



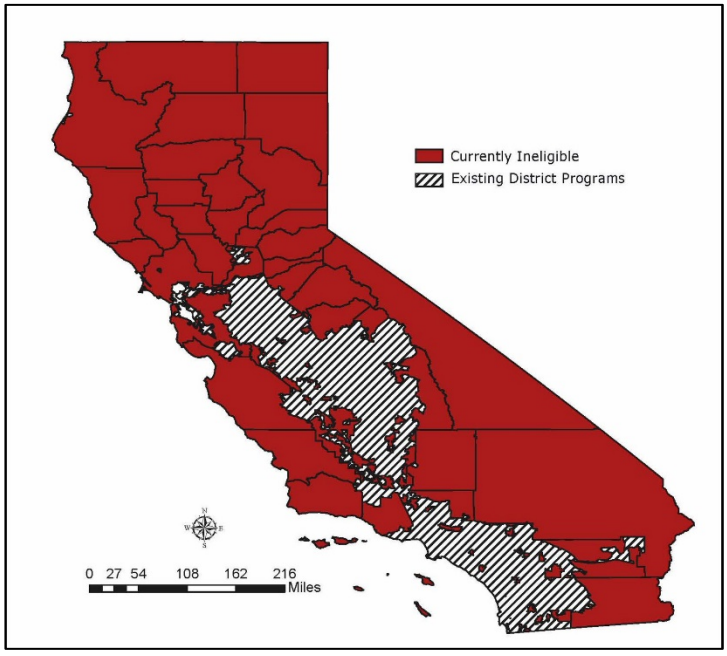
CARB staff is working closely with each air district to ensure their programs continue to progress and steadily increase participation. Districts have already increased support for online and call-center applications and offered various tools such as virtual inspections. With the additional recent funding, districts have taken measures to increase targeted outreach to priority populations. Staff also anticipates that alignment and integration with the Access Clean California and Financing Assistance programs will further increase participation and streamline the application process.

All district Clean Cars 4 All programs are expected to be able to operate through FY 2022-23 with current funds.

Statewide Expansion

As noted above, the Clean Cars 4 All program currently operates in the Bay Area AQMD, San Diego APCD, South Coast AQMD, San Joaquin APCD, and Sacramento Metropolitan AQMD. Consistent with direction from the Legislature, CARB proposes expanding geographic eligibility statewide while maintaining income eligibility requirements and developing a needs-based approach to focus the program on Californians in most need. The statewide expansion of Clean Cars 4 All will expand equitable access to clean transportation by expanding program eligibility to all areas of the state that are not able to participate in existing district programs including low-income communities, rural communities, tribal communities, and other priority populations that could benefit from the reliable transportation the Clean Cars 4 All program could provide to them. Statewide expansion will be achieved by allowing the five districts with existing programs to expand to all areas of their respective jurisdictions and with a single statewide program to serve all other areas of California. Areas eligible for existing district programs and those currently ineligible are shown in Figure 18. All currently ineligible areas would be served by the expanded district programs or the statewide program.

Figure 18: Clean Cars 4 All Current Geographic Eligibility



The statewide program aims to focus the benefits on those with the greatest need. Program eligibility will be determined primarily based on income, limited to participants with household incomes at or below 300 percent of the federal poverty level, currently an annual income of $83,250 for a household of four individuals. This is the same income eligibility limit as staff is proposing for the district programs. The statewide program will also require moving beyond the first-come, first-served models used in the existing district programs. A needs-based approach, developed in collaboration with Financing Assistance, will categorize applications based on income, disadvantaged community status, and other criteria to

prioritize and to meet the needs of participants who would benefit most from a more accessible Clean Cars 4 All program. Collaboration with CBOs and Access Clean California will help ensure that those in the greatest need are able to access the program. This is also complemented by SB 1382 (Gonzalez, Chapter 375, Statutes of 2022) which requires CARB to coordinate with the air districts and CBOs to identify barriers low-income consumers face when trying to participate in the Clean Cars 4 All program. In addition, AB 1382 also requires CARB to include an assessment identifying populations that are eligible for Clean Cars 4 All but are underserved by the program in the AB 630 report. Improved survey and data collection methodology will continue to assist in cataloging the needs of participants and providing insight on how the program can be improved. This shift in program design specifically addresses community concerns with the current first-come, first-serve model by ensuring that funding is prioritized for Californians in most need, respecting the needs of local communities, as well as supporting California's climate and air quality commitments. The needs-based approach is under development still, but could use a combination of mechanisms including income, residence, vehicle ownership, and other qualifiers to determine prioritization.

Joint Solicitation with Financing Assistance

In preparation for the statewide expansion effort, Clean Cars 4 All will solicit a third-party administrator through a competitive solicitation process. The third-party will administer Clean Cars 4 All in all areas outside the five air districts with existing programs. CARB plans to issue a joint solicitation between Financing Assistance and statewide Clean Cars 4 All to streamline the application process for residents in most need, providing increased opportunity to match the need for low-cost financing with the vehicle purchase incentives provided through Clean Cars 4 All. Combining the two programs into one solicitation directly addresses feedback CARB has received for several years from community members, environmental justice advocates, and the Legislature regarding the need to consolidate programs to reduce consumer confusion when applying for incentives. A combined solicitation will allow for better management of communication across the programs, consolidated processing of rebate applications, cooperative relationships with dealers, more streamlined efforts and use of outreach tools and materials (when appropriate), and result in fewer administrators and risk of added complexity when working in partnership with Access Clean California. Program staff held several independent and joint work group meetings with stakeholders and have generally received positive feedback from community members. However, some stakeholders indicated concerns around policy issues with statewide Clean Cars 4 All, and staff will continue to work through those issues in parallel to the solicitation process.

Regulatory Amendments

The required regulatory changes and Executive Officer authority to implement statewide expansion were approved in the FY 2021-22 Funding Plan. Regulatory changes, as adopted in the California Code of Regulations, title 13, division 3, chapter 13, sections 2630 through 2639, enabled statewide expansion by removing the population requirement for district eligibility and changing all instances of the term "district" to "administrator" when referencing program administration. CARB staff held multiple public meetings to discuss these regulatory changes, to present and receive feedback on those changes, the proposal

for statewide expansion, and the solicitation for statewide administrator to community members, community-based organizations, and stakeholders to ensure that these program changes are meeting the needs of priority populations.

Enhanced Flexibilities

Additionally, the FY 2021-22 Funding Plan outlined regulatory changes and Executive Officer authority to enhance the flexibility of the program. These updates reflect the current policies of the Clean Cars 4 All program and have already been approved by the Board. The flexibilities allow program administrators, in coordination with CARB, to further customize their programs to better serve the unique needs of their communities. After Board approval of the FY 2021-22 Funding Plan and updates to the regulation CARB held a separate public process to propose and receive public feedback on the changes. The updated policies are now available to CARB and the program administrators.

One such change allows CARB to consider program administrators' proposals to focus eligible replacements on only the cleanest technologies. This change does not remove eligible vehicle technologies from the program altogether but provides CARB the flexibility to approve district plans with such focus provided the district has vetted those plans through its own public process.

Updated policies also allow CARB to consider a participating administrator's plans to focus income eligibility on only those with the lowest incomes. This update does not limit income eligibility in the program immediately but provides CARB the flexibility to limit income eligibility and focus funding to the lowest income thresholds.

The ability to make modifications to incentive amounts are among recent policy changes. This allows increased program flexibility and responsiveness to changing market conditions for the lowest-income participants and those who require vehicles with adaptive equipment due to a disability. The Board delegated authority for the Executive Officer to make modifications to incentive amounts in the FY 2021-22 Funding Plan. In order to retain the ability to modify incentive amounts, CARB staff requests the Board delegate authority to the Executive Officer to make changes to the Clean Cars 4 All incentive amounts in the FY 2022-23 Funding Plan. These changes, following a public process to gather district and stakeholder input, may be necessary before Board approval of next year's Funding Plan, and so is necessary to avoid potential delays in implementing the regulatory updates.

Lastly, ongoing efforts for program integration with Access Clean California will provide greater transparency and ease of access for prospective applicants. Offering an eventual single portal of initial applications for multiple incentive programs along with Access Clean California's targeted education and outreach efforts will help reduce barriers to program access while increasing demand and participation.

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Additional Program Improvements

To provide additional benefit to participants, staff has amended recent Clean Cars 4 All grants to require districts to coordinate with CARB and the Access Clean California

administrator to develop and implement Access Clean California. Access Clean California will provide low-income consumers more efficient and transparent access to available vehicle purchase incentive programs, including but not limited to Clean Cars 4 All, through a streamlined application process. Integration with Access Clean California will also complement ongoing outreach efforts to reach priority populations.

Additional general program improvements are also underway, especially to address program issues that were highlighted by recent participant surveys. One issue that CARB and the districts continue to work on are efforts to further promote the adoption of mobility options as an alternative to vehicle replacements. Mobility options offer the greatest emission reduction benefits while allowing participants flexibility in their mobility choices. Following the inclusion of e-bikes as a mobility option for the program, some districts have already begun investigating e-bike options or launching pilots to determine what style of offerings would best serve their constituents. These efforts have already garnered interest from prospective applicants looking for non-vehicular transportation. Districts are also pursuing additional partnerships with local transit agencies and car sharing programs to increase their alternative mobility option networks.

Another issue being addressed is the availability of EVSE and prepaid charging card incentives for BEV and PHEV replacements. Each participating district already offers EVSE incentives but are pursuing means to increase feasibility, affordability, and adoption. EVSE and prepaid charge cards help maximize the benefits of PHEV and BEVs. Prepaid charging cards will especially benefit participants that cannot install in-home EVSE. The districts are also at various stages of implementing prepaid charging cards including South Coast AQMD and San Joaquin Valley APCD investigating local options, Bay Area AQMD piloting a card option, and Sacramento Metropolitan AQMD partnering with a contractor for full implementation. To ensure progress on these items continues, CARB staff is requiring districts to update the program implementation manuals to include specific details and/or plans to promote mobility options and EVSE/charge card availability.

Grant Award Process: Consistent with previous years' allocations, CARB awards Clean Cars 4 All funding to participating air districts non-competitively through grant agreements with the San Joaquin Valley APCD, South Coast AQMD, Bay Area AQMD Sacramento Metropolitan AQMD, and San Diego APCD. Funding for the proposed statewide program will be awarded via a competitive joint solicitation with Financing Assistance. This project will continue to require outreach, education, and consumer protections for lower-income consumer recipients living in or near disadvantaged communities.

Proposed Funding Allocation

Per legislative direction staff recommends allocating $125 million to the statewide program and $80 million to the district programs from the General Fund. Staff also recommends allocating $40 million of Low-Carbon Transportation funds to the district programs, bringing the district allocation to $120 million.

Table 20: Clean Cars 4 All FY 2022-23 Allocation (millions)

Program	General Fund	GGRF	Total
Statewide	$125	-	$125
Districts	$80	$40	$120
Total	**$205**	**$40**	**$245**

Air Districts

CARB's guiding principles when determining allocations include:

- Ensuring consistent, predictable funding.
- Use of data-based metrics to determine program capacity and predict future growth.
- Account for current and future market conditions.
- Solicit public input on appropriate metrics and methodology.

For FY 2022-23 staff is proposing to use a formula, based on the principles listed above, in order to enhance the transparency and predictability of the allocation process. Staff presented and received feedback on the allocation formula at multiple public meetings. The formula aims to allocate sufficient funding to each air district based on populations of individuals and eligible vehicles located in each district. The formula may be adjusted according to public feedback as well as to accommodate legislative direction in future years, however, the guiding principles will remain consistent.

As a baseline allocation, each district is given 10 percent, or $12 million, of the total allocation. The 3 districts that have achieved 1,000 projects in a 12-month period (South Coast AQMD, San Joaquin Valley APCD, and Bay Area AQMD) will receive another 10 percent of the total allocation. The remaining 20 percent, or $24 million, is split amongst those same three districts based on their average share of the following populations: total eligible population, the population of individuals below 200 percent of the Federal Poverty Level, disadvantaged community population, and the population of vehicles with model years from 1990 to 2007. This formula yields the proposed district allocations shown in Table 21. Staff used Calenviroscreen 4.0 to determine the human populations of each district and data from the DMV to determine the vehicle populations.

Table 21: Clean Cars 4 All District Allocations (millions)

District	Baseline	>1,000 Annual Projects	Population Share	Total
South Coast AQMD	$12	$12	$15	$39
San Joaquin Valley APCD	$12	$12	$5	$29
Bay Area AQMD	$12	$12	$4	$28
Sacramento Metro AQMD	$12	-	-	$12
San Diego APCD	$12	-	-	$12
Total	**$60**	**$36**	**$24**	**$120**

Statewide Program

As outlined in the 2022 Budget Act, the statewide program will receive $125 million from the General Fund. This funding will become available to the statewide program administrator after the solicitation process is completed. Staff anticipate that the statewide program will launch in 2023.

Proposed Changes to Project Criteria

Income Eligibility

In an effort to focus the benefits on those with the lowest incomes, staff proposes to limit the program to participants with household incomes at or below 300 percent of the federal poverty level. In addition to lowering the income limit, staff is also proposing to combine all income tiers one category as shown in Table 22. Simplifying income eligibility for the statewide and district programs will streamline program implementation and reduce confusion for applicants.

Incentive Amounts

In response to vehicle market conditions as well as stakeholder and community feedback, staff is proposing to increase the Clean Cars 4 All incentive amounts for plug-in hybrid and ZEVs. Applicants living in a disadvantaged community census tract are now eligible for an additional $2,000 beyond what is offered to non-DAC residents. Staff proposes a $500 increase for incentives for non-DAC residents who purchase a ZEV. The proposed incentive amounts are shown in 2.

Table 22: Clean Cars 4 All Incentive Amounts

Income Eligibility	8 Years Old or Newer Hybrid Electric Vehicle 35+ MPG (Combined)	8 Years Old or Newer PHEV	8 Years Old or Newer ZEV	Mobility Option
Less than or equal to 300% Federal Poverty Level	$7,000	$9,500 (Plus, up to $2,000 for EVSE or pre-loaded charge card)	$10,000 (Plus, up to $2,000 forEVSE or pre-loaded charge card)	$7,500 Face Value
Less than or equal to 300% Federal Poverty Level in Disadvantaged Communities	$7,000	$11,500 (Plus, up to $2,000 for EVSE or pre-loaded charge card)	$12,000 (Plus, up to $2,000 forEVSE or pre-loaded charge card)	$7,500 Face Value

Removal of conventional hybrids from Clean Cars 4 All eligibility by November 2024

As directed by the Legislature in the Budget Act of 2022, staff plans to remove conventional hybrids as an eligible vehicle type in Clean Cars 4 All by November 2024. As this change is now planned for a later date, staff will provide updates on the anticipated impact this change will have on Clean Cars 4 All in future Funding Plan documents.

Eligible ZIP Codes

In an effort to make Clean Cars 4 All available to all low-income residents of California, staff is proposing to allow program administrators to use their General Fund allocations to fund projects outside of ZIP codes containing a disadvantaged community census tracts.

Program Updates

Needs-based approach

In advance of statewide expansion, CARB staff plans to pursue additional program improvements. To ensure the statewide program will be effective at directing funds towards those with the greatest need, the statewide expansion of Clean Cars 4 All will identify and integrate needs-based elements in order to better navigate the needs and special circumstances of low-income consumers, particularly those residing in disadvantaged communities. The creation of this methodology will be done in conjunction with the Financing Assistance Program to provide for more streamlined applications processing between the two programs. As described in the Financing Assistance Section, in a needs-based model, applicants that meet one or more of the program's measurable criteria, such as income level, disadvantaged community residency, need for financial counseling, and others, would be automatically flagged as a priority applicant, triggering funds to be reserved and necessary support offered expeditiously. This element is currently being developed through extensive public processes to allow stakeholders to provide input for

determining need-based characteristics such as eligibility criteria, additional applicant support and accommodations, and other facets to secure the success of adopting this approach. A need-based process will help ensure that Clean Cars 4 All incentives reach the households that could best benefit from such assistance.

Program Alignment

CARB staff continue to work with districts, stakeholders, and dealerships to develop consistent expectations, consumer protections, and requirements for participating dealerships. Districts have already begun outreach efforts to expand partner dealership networks and increase understanding of program requirements. These updated and formalized standards will be developed through a public process to encourage stakeholder input. Once finalized, they will be incorporated as part of the requirements for a statewide program administrator to enact. This will ensure participants in expanded program areas will receive a similar dealership experience, benefits, and protections when working with approved dealerships.

CARB staff will also pursue additional avenues to maintain progress in other program improvements. This will include soliciting public feedback for different mobility and vehicle charging options that would best suit the local communities' needs. This same requirement will also be incorporated into any third-party administrator responsibilities.

Issuing Tax Form 1099-G

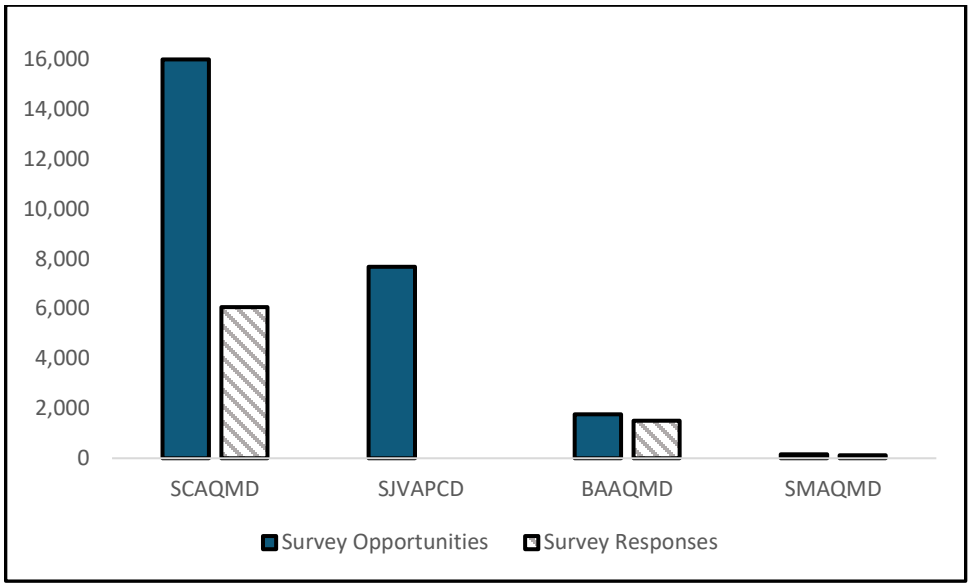
In response to stakeholder feedback and participant feedback, CARB is working with the districts to move towards a standardized approach to address tax implications of the program, including impacts on participants' tax returns. While CARB is not a federal or tax regulating entity, these incentives are intended to serve as purchase price buy-downs for low-income consumers, not income. The issue has real and significant impacts on the value of the incentive and therefore the efficacy of the program in total. To ensure that participants receive the same benefit regardless of location, CARB continues to work with the districts and tax regulators in this area to secure any additional clarity needed to harmonize the district programs on this issue.

Expanding Survey Reach

To better identify socioeconomic benefits and areas of improvement for the Clean Cars 4 All program, CARB Staff, alongside program administrators and behavioral economists, is developing an updated participant survey to utilize for each of the district programs. This survey will offer more consistency which will provide for more streamlined data collection, analysis, and identification of benefits or areas for improvement. In conjunction, staff is also working to refine the surveying methodology to improve data quality and response rate. The improvement of this survey and process are intended to be used to refine program-related processes, ensure participants fully benefit from their participation, and identify priority populations for future targeted outreach. This survey along with the metrics it is intended to measure will be developed in coordination with communities, program administrators, and other stakeholders on an ongoing basis in conjunction with the annual Funding Plan. Staff expects implementation of the improved surveys to begin in the current FY. Figure 19 shows

the survey response rate for the four air districts with existing programs. The data includes 12, 24, and 30 month surveys. San Joaquin Valley APCD has not compiled their returned surveys and was unable to quantify the number of responses.

Figure 19: Clean Cars 4 All Survey Response Rate



Project Evaluation and Outcomes

CARB requires program administrators to report project information on a quarterly basis at a minimum to include project administration and consumer surveys. With this information, through continued interaction with stakeholders and analysis of the light-duty vehicle market, CARB will be able to determine the participation rate and advancement of clean vehicles for priority populations and lower-income consumers, assess future funding needs, and evaluate other opportunities for program enhancements.

As part of CARB's response to the 2021 CARB Audit Report and per Board direction, CARB will continue to take measures to improve evaluation, analysis, and reporting of socioeconomic benefits for program participants. An expected socioeconomic benefit of the Clean Cars 4 All program is an increase in vehicle reliability. One metric for measuring this benefit is future disruptions of service based on the model year of the retired vehicle and that of the incentivized vehicle. The evaluation method is to model the predicted disruptions of service of the scrapped and replacement vehicles as a relative measure of reliability. Another qualitative metric is improved access to employment and goods and services as a measure of vehicle reliability. Before fully conducting the analysis, CARB staff's initial steps will be to refine the participant survey questionnaire and methodology. Incorporating elements of the vehicle reliability analysis into the updated survey will enable participants self-report on the improved vehicle reliability.

CARB has requested districts update program implementation plans to more readily provide specific data on jobs created by program-related activities. Data will be analyzed on the types of jobs created and trainings supported by Low Carbon Transportation funds

administered through the Clean Cars 4 All program. This data includes the total number of jobs funded, number of funded jobs held by members of priority populations, education and experience required, training programs administered, and credentials awarded.

CARB requests districts to regularly provide additional metrics including total applications received and ultimately processed to completion, current program staffing levels and processing capacity, and any additional metrics or plans that may inform the goal setting process as part of the annual program goal setting meetings. These additional metrics will aid in fine-tuning the goal setting process to better gauge program demand and application processing capability. The metrics will also assist in identifying common barriers in the application process and allow for staff to work with stakeholders and communities to identify solutions. CARB has already requested districts take additional steps to integrating with Access Clean California efforts, as well as conduct outreach to CBOs to ensure the program can be accessed by the populations with most need.

Staff estimates that the $125 million allocated for the Clean Cars 4 All statewide program would fund about 7,900 incentives and provide about 83,400 metric tons of CO2 equivalent GHG emission reductions. The allocation would also reduce approximately 58 tons of NOx, 3 tons of PM 2.5, and 12 tons of ROG.

Staff estimates that the $120 million allocated for the Clean Cars 4 All district programs would fund about 8,000 incentives and provide about 85,400 metric tons of CO2 equivalent GHG emission reductions. The allocation would also reduce approximately 60 tons of NOx, 3 tons of PM 2.5, and 12 tons of ROG.

CARB staff has updated Clean Cars 4 All grant agreements to further require participating air districts continue to report, on a quarterly basis, information regarding project administration and consumer surveys. With this information, and through continued interaction with stakeholders and analysis of the state of the light duty vehicle market, CARB will determine the participation rate and advancement of clean vehicles for priority populations, assess future funding needs, and evaluate other opportunities for making program enhancements.

As part of the response to the CARB Audit Report, CARB is taking measures to improve evaluation, analysis, and reporting of socioeconomic benefits for program participants. This includes an updated survey to provide for more streamlined data collection, analysis, and identification of benefits or areas for improvement. The updated survey will be incorporated into future Clean Cars 4 All grant agreements and required to be used in district survey efforts.

An expected socioeconomic benefit of the Clean Cars 4 All program is an increase in vehicle reliability. The updated survey will provide data regarding the frequency of disruptions of service of the scrapped and incentivized vehicles as a relative measure of reliability. Another expected benefit is improved access to employment and goods and services. Evaluation methods will include surveys in which participants self-report on improved access, and on participant testimonials.

Table 23: CARB Approach to Clean Cars 4 All Socioeconomic Benefit Analysis

Benefit(s)	Metric(s)	Evaluation Method(s)	Data Source	Reportable Outcomes
Increase in vehicle reliability.	Disruptions of service for retired vehicle and that of the incentivized vehicle.	Participant survey with questions regarding reliability of retired vehicle and incentivized vehicle.	Voluntary participant responses to user surveys. Surveys will be administered 6, 12, and 24 months after vehicle acquisition.	Relative number and percentage of participants who report improved vehicle reliability.
Improved access to employment and goods and services as a measure of vehicle reliability	User satisfaction of the overall vehicle and their access to job opportunities and goods accessibility	Participant survey with questions about changes in employment opportunities since receiving the incentivized vehicle.	Voluntary participant responses to user surveys. Surveys will be administered 6, 12, and 24 months after vehicle acquisition.	Relative number and percentage of participants who self-report their levels of satisfaction and accessibility to job opportunities and services.

CARB is working to increase transparency and cooperation with air districts in the annual setting of program participation goals. CARB will require districts and any third-party administrators regularly provide additional metrics including total applications received and ultimately processed to completion, current program staffing levels and processing capacity, and any additional metrics or plans that may inform the goal setting process. These additional metrics will aid in fine-tuning the goal setting process to better gauge program demand and application processing capability. The metrics will also assist in identifying common barriers in the application process and allow for staff to work with stakeholders and communities to identify solutions. One such effort already underway in coordination with the districts is the development of the Access Clean California pilot program to provide a one-stop-shop information and application portal for prospective applicants.

AB 1550 Disadvantaged Community and Low-Income Household/Community Benefits: Clean Cars 4 All air district programs require that recipients GGRF funds must reside in ZIP codes containing a disadvantaged community census tract. Air districts may use General Funds for projects for projects in any ZIP codes in their respective jurisdictions however, grant agreements for the FY 2022-23 funds will require all projects located in disadvantaged communities to be funded with GGRF funds while those funds are available. This requirement will help to maintain compliance with AB1550 requirements. For FY 2017-18 and later, AB 1550 imposed new investment criteria and goals for projects funded by GGRF. Staff considered whether it should change the geographic eligibility

requirements in response to AB 1550, such as limiting participation to disadvantaged community census tracts rather than ZIP codes containing disadvantaged community census tracts. However, feedback from stakeholders indicated such a change would create unnecessary implementation barriers. As such, rather than downsizing the program to meet AB 1550 requirements, staff proposed and was Board approved to maintain the existing ZIP code eligibility and low-income eligibility requirements for the Low Carbon Transportation funding.

From December 1,2020 through November 30, 2021 Clean Climate Investment reporting periods, 51 percent of Clean Cars 4 All funding went to applicants in disadvantaged communities and 47 percent went to applicants living in low-income communities and low-income households that don't overlap with disadvantaged communities, for a total priority population benefit of 98 percent. The California State Auditor (CSA) also recommended that CARB report the total percentage of funding that went to low-income households (including those that overlap with disadvantaged and low-income communities). 94 percent of Clean Cars 4 All funding went to low-income communities and households. Low-income household statistics are for projects evaluated using AB 1550 criteria and do not include grants awarded before August 4, 2017. As reported in the April 2022 Annual Report to the Legislature on California Climate Investments Using Cap-and-Trade auction proceeds, 97 percent of Clean Cars 4 All funding is now benefitting priority populations.[60] Clean Climate Investments data and reporting only includes data for projects funded with GGRF funds. Using historic project data, staff expects that at least 75 percent of allocated funds would meet one of the AB 1550 criteria (see Table A-75 in Appendix A), but staff expects to exceed this minimum estimate.

[60] California Air Resources Board. *California Climate Investments: 2022 Annual Report*. April 2022. https://ww2.arb.ca.gov/sites/default/files/auction-proceeds/cci_annual_report_2022.pdf

Zero-Emission Assurance Project (ZAP)

Proposed General Fund Allocation–$10 million

Project Overview and Goals

ZAP was established by AB 193 (Cervantes, Chapter 363, Statutes of 2018) to help lower-income Californians reduce the risk of buying a used ZEV by providing a rebate or vehicle service contract for the replacement battery or fuel cell component. According to the SB 350 Guidance Document, one of the biggest barriers to ZEV adoption in the marketplace is affordability—if ZEV components fail, replacement batteries in electric vehicles can cost over $5,000 and for many lower-income consumers this type of expenditure makes it unattractive or even impossible to purchase a ZEV. This new project complements CVRP and equity projects, such as Clean Cars 4 All and Financing Assistance, by helping to alleviate low-income residents' concerns about premature battery degradation resulting in reduced vehicle performance, vehicle depreciation, and costly repairs.

Current Project Status

While legislation established this program in 2019, direct funding for ZAP has not been allocated by the Legislature through previous annual Budget Acts. In the interim, funding from the local Financing Assistance program, the Driving Clean Assistance Program, has been utilized to run a data collection pilot to help inform program design in anticipation of a statewide program.

The grantee that oversees the Driving Clean Assistance Program, the Community Housing Development Corporation (CHDC), has subcontracted with the Foundation for California Community Colleges (FCCC) to collect data to better understand how battery life depreciates over time. To collect data for this project, FCCC is installing on-board diagnostics trackers (OBD) in eligible vehicles on a voluntary basis. The 18-month data collection pilot began in April 2022 and to-date, CHDC and FCCC have installed 20 of the planned 45 OBDs in vehicles purchased through both Financing Assistance programs. Staff will provide updates on this pilot through the public process and in future iterations of this plan.

Proposed Funding Allocation

Consistent with Legislative direction, staff is proposing $10 million, which would be administered through a third-party administrator, or other appropriate mechanism, to develop and implement a statewide version of ZAP. Staff will work with stakeholders through the public process to determine the policy for the program and next steps. Staff will provide updates on the development and implementation of statewide ZAP in next year's Funding Plan.

Project Evaluation and Outcomes

As this is a new project, not enough is known about how ZAP will be implemented to make the valid assumptions needed to quantify benefits. Emission reductions and other benefits of funded projects will be quantified during project implementation. Staff will coordinate internally to develop GHG emission reduction methodologies for ZAP and provide reduction estimates when possible.

Electric Bicycle Incentives Project

Proposed Low Carbon Transportation Allocation–$3 million

Project Overview and Goals

The Electric Bicycle Incentives Project aims to provide rebates to reduce the purchase price for e-bikes to income qualified consumers. This program will be designed to help Californians reduce their VMT by lowering barriers to e-bike ownership, as well as to educate Californians about bicycle safety and support local businesses.

The purpose of this program aims to 1) help people replace car trips with e-bike trips, 2) increase access to e-bikes, and 3) reduce GHG emissions.

Electric Bicycle Incentives Project At A Glance…

- $10 million allocated to date
- Administrator announced in August 2022: Pedal Ahead
- Low-income focused incentive
- Consumer facing program expected to launch in early 2023

Through June 30, 2022

Source: Velotric (velotric.bike)

Current Project Status

The Electric Bicycle Incentives Project was allocated $10 million in the 2021-22 state budget and is currently under development. The solicitation for an administrator closed on May 11, 2022, and CARB announced on August 24, 2022 that Pedal Ahead, a San Diego nonprofit, was selected to be the administrator for the program. Staff is working with Pedal Ahead to execute a grant agreement as soon as possible. CARB is aiming to launch the consumer facing program in the first quarter of 2023. Staff also continues to hold project development workgroups to identify eligibility and other criteria for applicants, e-bikes, and the overall program scope.

Terms and Conditions: Similar to the vehicle purchase incentive projects, when this project is launched, CARB and the project administrator will develop Terms and Conditions to highlight the policies set forth by the Board in more detail for consumers, and to ensure a fair, equitable, and responsible project. More specifically, the Terms and Conditions are intended

to notify consumers of the core requirements of the program prior to submitting an application. CARB and the project administrators will develop an Implementation Manual, which will include the Terms and Conditions, to further define these rules, roles, and responsibilities.

These documents will be incorporated into future Funding Plans by reference and updated periodically throughout the year to reflect project changes after the Board adopts each funding plan and as other changes are necessary to provide further clarity.

Solicitation: CARB successfully launched the solicitation to find a grantee to administer FY 2021-22 Electric Bicycle Incentives Project funds via a competitive solicitation that retained the option to award additional funds from FY 2022-23 and FY 2023-24 to the selected grantee under the same terms and conditions.

Proposed Funding Allocation

Based on public work groups and interest in this project, staff anticipates strong demand for an e-bike voucher and is proposing an allocation of $3 million from the Low Carbon Transportation allocation for FY 2022-23.

Proposed Changes to Project Criteria

Staff is not proposing any substantial changes to the Electric Bicycle Incentives Project.

Project Evaluation and Outcomes

The Electric Bicycle Incentives Project will achieve GHG emission benefits by providing individuals incentives for e-bikes to help motivate consumer purchasing decisions, support active transportation, and displace VMT with bicycle trips. Because this project is currently under development, staff is working through project details with stakeholders and, over the coming months will develop the additional details and other key project parameters needed to prospectively quantify emission benefits. Staff will coordinate internally to develop GHG emission reduction methodologies for the Electric Bicycle Incentives Project and will provide emission reduction estimates when available.

The Electric Bicycle Incentives Project will achieve GHG emission benefits by providing individuals incentives for e-bikes to help motivate consumer purchasing decisions, support active transportation, and displace VMT with bicycle trips.

Because this is a new project, staff is working through project details with stakeholders and over the coming months will develop the additional details and other key project parameters needed to prospectively quantify emission benefits. Staff will coordinate internally to develop GHG emission reduction methodologies for the Electric Bicycle Incentives Project and if available provide emission reduction estimates in next year's Funding Plan.

AB 1550 Disadvantaged Community and Low-Income Household/Community Benefits: The Electric Bicycle Incentives Project may be implemented on a first-come, first-served, statewide basis, so it is not possible to estimate in advance exactly how much funding will be spent in and benefit disadvantaged communities, low-income communities, and low-income

households. Staff will evaluate the best strategy to reach low-income residents during program development.

Access Clean California

Proposed Low Carbon Transportation Allocation–$1 million

Project Overview and Goals

The goals of Access Clean California (formerly named the One-Stop-Shop Pilot Project) are to work with local CBOs and community leaders to help increase awareness of Clean Transportation Equity funding opportunities, continue to build local community capacity, and streamline access to Clean Transportation Equity projects. These investments help to reduce barriers to participation, expand education, and raise awareness in the most impacted and underinvested communities. Through Access Clean California, equity metrics will help CARB evaluate how effectively these equity outcomes are operationalized and achieved.

Access Clean California At A Glance…

- $14 million allocated
- $12 million implemented
- 100 percent of funding benefits disadvantaged communities
- Project provides outreach and application support for clean vehicle purchase incentives and does not have quantified emissions benefit reductions

Data through June 30, 2022

Current Project Status

To date, CARB has allocated $14 million to Access Clean California, starting with $5 million of VW settlement funding in FY 2017-18 to initiate development of the project. After a competitive solicitation in 2018, GRID Alternatives was selected as the program administrator. CARB allocated additional funding in FY 2019-20 ($5 million), and FY 2021-22 ($4 million). The grant for the FY 2021-22 allocation was executed in April of this year.

Stemming from a priority recommendation of both CEC's SB 350 Low-Income Barriers Study and CARB's SB 350 Guidance Document, Access Clean California takes a multi-dimensional

approach to outreach with the ultimate goal of streamlining access to, and coordinating outreach for, the state's clean transportation and clean energy consumer-based equity projects. While a long-term goal is for Access Clean California to be a multi-agency platform, in the near-term the pilot project focuses on CARB's clean vehicle purchase incentive programs, including Clean Cars 4 All, Financing Assistance including the CVA Program, and CVRP, as well as other programs already built into Access Clean CA like the California Public Utility Commission's (CPUC) Disadvantaged Communities – Single-Family Solar Homes, or DAC-SASH, low-income solar program.

The pilot has undertaken a user-centered approach to developing the various components of Access Clean California. To date, the pilot successfully built and supports a statewide network of outreach partners. Access Clean California provides funding and resources to the outreach partners to help CARB spread the word about its clean transportation equity programs and build trust and capacity in priority populations. In support of these partners, Access Clean California also maintains a resource hub to make outreach resources more accessible, as well as providing a platform for partners to come together, share lessons learned, exchange best practices, and facilitate communication. The project's outreach coordination efforts support CARB's Strategic Outreach Roadmap key strategies, including creating a community of practice for project administrators and outreach partners, building a searchable database of CARB's clean transportation outreach efforts, and partnering with the Greenlining Institute to develop equity metrics to evaluate outreach effectiveness.

To streamline the application process, GRID Alternatives undertook a human-centered design approach to create the Benefits Finder, which is a centralized application tool that helps users determine eligible programs and kick-start their applications. The Benefits Finder is hosted on the Access Clean California web-platform and is currently available for facilitated-use by the project's outreach partners via targeted outreach in priority populations. The Benefits Finder also provides a centralized income verification, which helps streamline one of the more burdensome steps for both applicants and program administrators. To support applicants through the entire application process, GRID Alternatives has also developed a case management system with supporting back-end software.

Although most programs were placed on hold due to lack of funding during 2021, Access Clean California used this opportunity to continue refining the Benefits Finder application tool, and released an updated, more comprehensive version in late 2021. Over the first two quarters of 2022, the updated Benefits Finder tool experienced a steady increase in users and in number of applications submitted each month, despite there still being limited funding in the more popular programs. By the end of June, the Benefits Finder had received 138 applications that spanned across multiple programs and income-verified 40 applicants. Approximately 80 percent of applicants applied to the Financing Assistance programs (either CVAP or DCAP) and stacked their incentive with CVRP. The remaining applicants chose Clean Cars 4 All or the Peninsula Clean Energy Used EV Rebate Program, a newly integrated, locally implemented rebate program operated in San Mateo County. Approximately two-thirds of all Benefits Finder applicants earn an income less than 225 percent of the federal poverty level. During this same period, the Access Clean California network focused on building a strong network of outreach partners – currently consisting of 19 non-profit and

community-based organizations – they conducted over 110 outreach events (such as community workshops, social media campaigns, and ride and drives) across the state, engaging approximately 4,800 community members.

With the FY 2021-22 allocation, CARB staff and the Access Clean California project team plan to, as feasible, scale-up outreach implementation and expand the outreach partner network, with an emphasis on partnering with CBOs and other local grassroots organizations, as well as increasing participation from priority populations. This includes setting participation targets to support achieving proportional participation from communities who are underrepresented in participation data to-date. CARB staff and GRID Alternatives will also be exploring opportunities for Access Clean California to support the transition of CVA Program to a needs-based model and outreach for the statewide Clean Cars 4 All program, as well as integrating the new Electric Bicycle Incentives Project. Access Clean California will continue working to expand the Benefits Finder to include additional programs to fulfill the ultimate vision, as outlined in CARB's SB 350 Guidance Document, of being a multi-agency platform for the state's equity focused clean transportation and energy programs. Discussions with state partners, such as CPUC, CEC, and other state agencies, are ongoing to determine longer-term integration and project support via additional funding sources. Finally, the scope of the FY 2021-22 grant also included leveraging the Access Clean California network of outreach partners to bolster CARB's community engagement to gather input on relevant incentive programs and regulations.

Terms and Conditions: Similar to the vehicle purchase incentive projects, when this project is launched, CARB and the project administrator developed Terms and Conditions to highlight the policies set forth by the Board in more detail for consumers, and to ensure a fair, equitable, and responsible project. More specifically, the Terms and Conditions are intended to notify consumers of the core requirements of the program prior to submitting an application. The Terms and Conditions for the Access Clean California Benefits Finder application process can be accessed here: https://accesscleanca.org/terms-of-use.

The Terms and Conditions are incorporated into the Funding Plan by reference and updated periodically throughout the year to reflect project changes after the Board adopts each funding plan and as other changes are necessary to provide further clarity.

Solicitation: With a proposed allocation of $1 million, staff is proposing to postpone the competitive solicitation for FY 2022-23 until sufficient funds are allocated.

Proposed Funding Allocation

Staff recommends a proposed allocation of $1 million, which for this next year, aims to maintain the current program.

Staff recognizes that there is significant need to scale-up implementation of Access Clean California, expand the network of outreach partners, fill outreach gaps through outreach targeting priority populations across the state, and address the uniqueness of applying to each program. However, without additional funding this year, efforts to expand Access Clean California will be delayed until future funding is allocated.

Proposed Changes to Project Criteria

Staff is not proposing any substantial changes to the Access Clean California. Staff will however, will be working to implement SB 1230 (Limon, Chapter 371, Statutes of 2022) which requires CARB to create, contingent upon appropriation by the Legislature, a single unified education and application portal that would enable an applicant to apply with a single application, to CARB's clean vehicle purchase incentive programs, which is already underway with Access Clean California.

Project Evaluation and Outcomes

Access Clean California is designed to increase awareness and enable more efficient implementation of CARB's Clean Transportation Equity projects and expand participation by priority populations. Because this is an "enabling" project, CARB staff is not quantifying any direct emission reductions for this funding. Rather, this project will help achieve the emission reductions anticipated for Clean Cars 4 All, Financing Assistance, and CVRP, as well as the various clean mobility investments, which are quantified in those sections of the Funding Plan. However, it is still important to measure the success of this project. CARB will report the outcomes of this project in future Funding Plans. Staff proposes to use metrics such as number of successful applications, outreach events, training sessions, and networking workshops. CARB will also require the grantee to develop surveys of participants as a way to determine how well the project is working and determine whether refinements are needed.

Access Clean California developed an equity metrics framework to quantitatively and objectively measure how effectively the project is achieving and operationalizing its equity goals. Developed with input and feedback from outreach partners, the metrics help identify areas of strength, challenges, and gaps in the project's implementation strategy. For each goal, multiple indicators are measured and aggregated to an overall score. To evaluate how successfully the project is raising awareness of the equity projects, for example, the metrics measure nine different outcomes, including the number of project administrators capturing demographic data, number of outreach partners representing priority audiences, and percentage of applicants from priority populations. CARB staff and GRID Alternatives will evaluate these metrics in FY 2022-23 to establish a baseline and periodically reevaluate to allow the program to adapt and adjust to meet the needs of its priority audience and communities. These metrics support the Greenlining Institute's Mobility Equity Framework.

AB 1550 Disadvantaged Community and Low-Income Household/Community Benefits: This project is intended to make it easier for low-income households and low-income and disadvantaged communities to access Low Carbon Transportation Incentive funding and thus supports the AB 1550 goal of increasing investments in priority populations. All of these elements will ultimately help to increase ZEV adoption by low-income residents through CARB's incentive projects, such as CVRP and Financing Assistance, as well as support development of clean mobility options in disadvantaged communities through CARB's clean mobility projects, such as CMO and STEP. Staff is estimating about half of the proposed $5 million will directly benefit priority populations through capacity and partnership building.

California Integrated Travel Project (Cal-ITP) Payment Issuance Strategy and Demonstrations

Proposed Low Carbon Transportation Allocation–$1 million

Project Overview and Goals

The Payment Issuance Strategy and Demonstrations being developed by Cal-ITP, which is administered by the Capitol Corridor Joint Powers Authority (CCJPA), would support various projects across CARBs light-duty vehicle incentive projects. Specifically, this project seeks to ensure that any transit customer, and specifically underbanked and unbanked customers can easily pay for transit by accepting Euro Pay, Master Card, and Visa open-loop payments. By allocating funds to support this effort, the effort can expand to include EV charging and other mobility options, such as carsharing, bike and scooter sharing.

This project will use demonstration projects to enable seamless payment issuance to provide proof of concept in California and will provide research, data and lesson learned for Cal-ITP and CARB to improve the travel experience and implement scalable solutions. In 2022, with the payment acceptance demonstrations underway as well as the completion of the payment acceptance master service agreements in the California Mobility Marketplace[61], the payment issuance work task can move from theoretical to reality to assess costs and benefits associated with these solutions for customers, transit operators, and other mobility partners in California.

Current Project Status

Payment Issuance strategies and associated demonstrations are underway with Monterey-Salinas Transit, Sacramento Regional Transit, and Santa Barbara Metropolitan Transit District and CCJPA. More demonstrations are underway. Projects include:

- Making Square's Cash App and Visa Cash App Debit Cards available to un- and underbanked transit riders, and tracking adoption and usage patterns in and beyond transit.
- Distributing a reloadable prepaid debit card for delivering Clean Cars 4 All benefits to low-income electric vehicle drivers to use at public charging stations.
- In partnership with the California Department of Technology, developing a platform for transit riders to verify their identity and benefit eligibility, and link fare discounts to their debit or credit cards.
- Working with partners to evaluate opportunities to reward low-income transit and EV drivers with cash back rewards/loyalty programs to improve affordability.

Through these and other projects, Cal-ITP has learned that although there are gaps in distribution, existing commercial payment products can meet the needs of low income and un- and underbanked transit riders and EV drivers.

[61] https://www.camobilitymarketplace.org/

Further, it is clear that issues of availability, access and equity can be addressed by coordinating across existing payments, technology, non-profit, and public sector entities. Many private organizations are motivated to address mobility and financial inclusion gaps, as they see growth opportunities in supporting these underserved customers; this motivation can be leveraged by the State to meet sustainable mobility and financial inclusion policy objectives.

Proposed Funding Allocation

Staff is proposing $1 million, which would be administered through an Interagency Agreement with CCJPA, or other appropriate mechanism, to support and expand upon the work that has begun to identify payment issuance approaches to make vehicle charging and other mobility options easier to access for low income, banked, or unbanked individuals.

Project Evaluation and Outcomes

The Payment Issuance Strategy and Demonstrations being developed by Cal-ITP would support various projects across CARBs light-duty vehicle incentive projects. Specifically, this project seeks to ensure that any transit customer, and specifically underbanked and unbanked customers can easily pay for transit by accepting Euro Pay, Master Card, and Visa open-loop payments. Because this project supports consumer transit and micromobility options offered in CARB's other incentive projects, such as Clean Cars 4 All and CMO, staff is not quantifying any direct emission reductions for this project. Instead, this project is expected to help achieve the emission reductions projected for other light-duty vehicle incentives.

With the demonstration projects functioning as research and development for CARB's incentive programs (including but not limited to Clean Cars 4 All and CMO), anticipated outcomes include recommendations to State and other public organizations on how to design and administer benefits programs targeted at addressing issues of financial access and equity at scale so as to leverage the buying power necessary to address the unaddressed market. These are anticipated to include:

- Insights to improve how low-income residents can obtain and use benefits, and how CARB can increase efficiency in their distribution.
- Guidance on the use of bank cards / accounts, and other aspects of the existing retail payments ecosystem, as a means of distributing incentives.
- Identification of opportunities to coordinate across State agencies and with the private sector.

Clean Mobility Investments

CARB's clean mobility investments have been designed to be complementary to CARB's clean vehicle ownership projects. Together, both expand clean transportation access, which is an important social determinant of health because it facilitates access to schools, health care, healthy food, and economic opportunities; reduces the likelihood of negative health outcomes from air pollution; and contributes to improved quality of life. However, California cannot rely on single-occupancy vehicles to meet transportation needs and the state's climate goals. According to the SB 150 Progress Report, California must reduce VMT per capita to meet its 2030 climate goals and beyond. Since FY 2014-15, CARB's clean mobility investments have worked to tackle both objectives: funding clean and shared transportation services, such as public transit, electric carshare, bikeshare, and electric shuttles, that increase access to key destinations while reducing GHG emissions and VMT. Consistent with the AB 32 Scoping Plan and related complementary measures, CARB's clean mobility investments have supported the state's move toward a comprehensive ecosystem of more equitable, integrated, clean transportation services offering high-quality, affordable, and accessible solutions that meet priority population needs.

The success of these clean transportation services is dependent on their uptake in the priority populations they are intended to serve. CARB's SB 350 Guidance Document identified a list of barriers, such as affordability and access to, or awareness of, funding opportunities, that priority populations face in accessing clean transportation options. It includes recommendations such as identifying and prioritizing funding for projects that address communities' transportation needs and integrating community-driven decision-making throughout planning and implementation. CARB's clean mobility investments continue to incorporate these practices to ensure successful and equitable implementation.

Since FY 2014-15, CARB has piloted various funding approaches and shared mobility project types to meet the needs of priority populations across the state. The pilot phase has been critical for testing these approaches, allowing for flexibility and adjustments when necessary, and has proven that there is an immense need for clean mobility and planning and capacity building projects to serve the state's priority populations. As CARB continues implementing clean mobility investments, there will be a focus on transitioning from the pilot phase to the program phase. This includes accelerating investments, expanding mobility services to communities where there are funding gaps, and incorporating lessons learned from CARB's pilots. The goal is to expand and replicate proven funding approaches intended to maximize benefits for, and participation from, the state's priority populations.

CARB's clean mobility investments often introduce new and innovative project types in communities that have faced historical underinvestment. It is increasingly clear how important community capacity building and localized outreach and technical support are to successfully implement these projects and ensure they are sustainable for the long term. With each new challenge comes an opportunity to learn and share information for more efficient and effective project implementation. CARB will support current and future funding recipients by documenting and sharing lessons learned and providing opportunities for funding recipients to do the same such as through the Clean Mobility Equity Alliance network created through the CMO Voucher Pilot Program.

Across its clean mobility and planning and capacity building programs, CARB will work to streamline and simplify the application process, making it easier for under-resourced communities to access needed funding. CARB will work to identify opportunities throughout the state, while prioritizing investments in some of the state's most disadvantaged communities, including how to increase participation through focused outreach and engagement. CARB will also endeavor to support continuation of existing projects along with investments in new communities.

CARB will need to work collaboratively with partners at every level to be able to fund many of the clean transportation services necessary to achieve the state's climate and equity goals. CARB continues to coordinate with federal, state, and local partners to ensure accessibility and transparency and to leverage outside resources to enhance clean mobility projects and expand workforce training and career development. For example, CARB will continue to work in close collaboration with other state transportation agencies such as the California Department of Transportation, the California Transportation Commission, and California State Transportation Agency and local organizations as we move ahead with implementing clean mobility investments given our collective role in supporting a cleaner and more sustainable transportation system. Although other agencies have funding for transit and active transportation investments, communities have requested CARB contribute to complimentary, overlaying programs so that funding is made available for multiple clean transportation modes at the same time and can allow for more community-based and specific solutions to form a more equitable transportation future. CARB demonstrates models of equity-centered mobility programs that works to catalyze and prioritize clean transportation and air quality goals. Working with sister agencies to further operationalize equity principles, such as broader access to clean mobility options and key destinations across programs, is a critical way for priority populations to reap the most long-standing socioeconomic and quality of life benefits.

Furthermore, CARB is working with partners to identify opportunities to make funded clean transportation services self-sufficient where possible – not reliant on CARB funding to remain financially sustainable in the long-term. CARB's first regional clean mobility pilots have been operational for about five years, and while they are not at the point of being financially sustainable, they have provided real-world experience that helps to identify opportunities for investments in new projects as well as continuing support for communities benefitting from ongoing projects.

Clean Mobility Projects

Proposed General Fund Allocation–$40 million
Proposed Low Carbon Transportation Allocation–$15 million

Project Overview and Goals

CARB's clean mobility investments are working to address specific community-identified transportation needs. Overall, the goals of the three programs outlined below are similar in that they attempt to increase residents' access to clean transportation options without the need for personal vehicles, consistent with findings in the SB 350 Guidance Document. However, the programs take different yet complimentary approaches to addressing this goal and meeting the needs of different types of communities. Staff are working to move from the pilot phase to larger community-based programs and propose continued funding for the following three programs:

- **CMO:** A first-come, first-served voucher program focused on shared mobility services for smaller entities with limited resources and community transportation needs assessments through a statewide administrator approach. CMO currently provides smaller scale shared-mobility project funding, such as zero-emission carshare and on-demand microtransit opportunities, as well as investments in community transportation needs assessments. CARB's established Regional Clean Mobility Pilots, from the beginning years of funding which include multiple carsharing, mobility options projects and Agricultural Worker Vanpools, provided a foundation for CARB's understanding of the clean mobility landscape and investment implementation in priority populations and will continue to be supported through CMO.
- **CMiS:** A competitive grant program focused on the clean transportation needs of K-12 public school districts. CMiS specifically focuses on the unique needs of school districts in meeting their comprehensive clean transportation goals and facilitates clean transportation opportunities in and around the school community, including clean mobility options such as car share, zero-emission school buses and delivery trucks, zero-emission lawn and garden equipment and education for staff, students, and parents.
- **STEP:** A competitive grant program for a larger set of clean transportation and supporting projects that address residents' transportation needs and reduce VMT. STEP provides larger-scale project funding that is focused on a community's transportation system and advances multiple clean transportation strategies within a community including active transportation, fixed-route transit, and shared mobility, as well as supporting strategies such as community development, land use, and mode shift support.

Clean Mobility Investments At A Glance*…

- Over $164.2 million invested in CMO, regional clean mobility projects, CMiS, and STEP
- 100 percent of funds benefit low-income and disadvantaged communities
- $37.9 million in travel cost savings, 2.7 million in net fossil fuel use reductions, and 40.9 million passenger vehicle miles traveled reductions
- 595 directly supported jobs, 201 indirectly supported jobs, 351 induced jobs
- Over 4,000 regional clean mobility project users
- 92 percent average user satisfaction rate for regional clean mobility projects

*Data to support "At a Glance" statistics can be found in Table 25 and Table 26 and includes data through June 2022.

These programs have been developed to move forward collectively in increasing clean transportation access and options specific to the communities' needs while also reducing the need for personal vehicle use in support of Sustainable Communities Strategy implementation. Through these programs, CARB has been implementing different approaches rather than one, singular clean mobility program, to determine what approaches work well and where further investments should be made. For example, CARB has learned how important building community capacity and providing technical assistance is to support clean mobility investments. Therefore, CARB is proposing to provide substantial funding specifically for community-led planning and capacity building projects and provide comprehensive technical assistance support tailored to community needs.

CARB has allocated a total of $2 million for technical assistance and capacity building pilots implemented through Access Clean California. Communities continue to convey a need for additional funding for planning and capacity building in order to best identify residents' transportation needs and position themselves to launch successful and sustainable projects that meet those needs. Alongside the three programs listed above, staff proposes to expand funding for a diverse set of planning and capacity building projects that can increase priority populations' capacity to participate in clean mobility programs and prepare for clean transportation project implementation. Planning and capacity building projects are intended to deliver direct and meaningful community benefits by facilitating intentional engagement inclusive of marginalized populations in all planning stages, as well as by empowering

community leaders and residents to meaningfully shape the transportation decisions that impact their lives.

CARB's clean mobility planning and capacity building programs will incorporate workforce training and development principles that also reflect community-identified needs and findings in CARB's SB 350 Guidance Document. This includes considering specific guidance or requirements for applicants to support the zero-emission economy through training programs and local hiring where feasible, as part of clean mobility projects.

Throughout program implementation, CARB will focus on measuring and analyzing socioeconomic benefits and improving and adapting existing programs based on data and lessons learned. CARB has seen an increasing need to identify clear and measurable metrics that can be used to assess progress and inform program design and implementation to maximize benefits. CARB is supporting multiple contracts that will help identify and evaluate this type of data.

Current Project Status

FY 2014-15 marked the first year of funding for CARB's clean mobility investments. Ever since, CARB has been expanding its portfolio of funding pilots, adapting, and learning from each.

CARB started funding Regional Clean Mobility Pilots with two carsharing and mobility option solicitations. Many of these projects are still ongoing, supported by continuing CARB investments. While these projects have delivered many benefits and have played an integral role in helping CARB understand the benefits and challenges of operating shared mobility projects in priority populations, CARB learned through the solicitation process that many smaller, less-resourced communities were not able to successfully compete for shared mobility project funding.

In 2018, the concept for CMO was developed based on learnings from the Regional Clean Mobility Pilots. In response to stakeholder and community feedback, CARB piloted a first-come, first-served approach meant to streamline the application process and reduce barriers to funding for clean, shared transportation options, including zero-emission carshare, bikeshare, scooter-share, vanpool, and ride-hailing services. These projects address community-identified transportation needs and increase the availability of clean transportation options in disadvantaged and low-income communities. CARB released a solicitation for a statewide administrator for the program in 2018 and has since held two application windows, one for community transportation needs assessment vouchers and one for mobility project vouchers.

CARB held its first CMiS solicitation in late Summer 2019, incorporating key recommendations from the SB 350 Guidance Document. CMiS grants directly fund ZEVs, charging infrastructure, active and alternative modes of transportation, and more, in K-12 public school districts. CMiS aims to facilitate bold transformations in transportation and mobility options in and around school communities, increasing knowledge and acceptance of zero-emission mobility options for staff, students, parents, and the surrounding disadvantaged communities.

STEP followed with its first solicitation for both Planning and Capacity Building Grants and Implementation Grants in Summer 2020. STEP's overarching goal is to increase transportation equity in priority populations by 1) addressing community residents' transportation needs, 2) increasing access to key destinations, and 3) reducing GHG emissions and VMT. STEP focuses on projects that support sustainable communities, attempting to address some of the complex transportation and land use challenges identified in the SB 150 Progress Report. Similar to CMiS, STEP incorporates key recommendations from CARB's SB 350 Guidance Document, providing the flexibility to fund many different types of clean transportation and supporting projects in a single community to help meet the unique needs within that community's context.

All of CARB's clean mobility investments have relied on strong partnerships to facilitate collaboration between community residents and representatives, local public agencies, including transit agencies, and private partners. This collaboration can support integration of clean mobility projects within the broader transportation system and can help these projects work for the residents who need them most. In addition to strong local support, CARB continues to increase the technical assistance and capacity building activities available to funding applicants and recipients.

The CMO statewide administrator team, which includes CALSTART, the Shared-Us Mobility Center, and CivicWell, supports interested parties with every stage of shared mobility project application and implementation. The CMO team has also started a peer learning group, called the Clean Mobility Equity Alliance, where current mobility project and community transportation needs assessment voucher recipients come together to share their experiences in designing and implementing programs and opportunities for investment improvements. Due to the importance of sharing mobility investment lessons broadly, the CMO team is exploring the potential of expanding this group to include regional pilot, CMiS, and STEP grantees, as well as other shared mobility stakeholders and implementers. STEP also provided application and implementation support to potential applicants and grantees via contracts with the Strategic Growth Council and UC Berkeley's Othering and Belonging Institute.

The Statewide CMO Voucher Pilot strives to provide mobility options to California's most overburdened communities including tribal governments. In 2020, CMO opened the first round of funding for CTNA and MPV. The MPV funding window included a $2.15 million set-aside specifically for tribal governments. In total, CMO awarded over $2.1 million for 4 CTNAs and two MPV tribal government projects. The awarded projects will go to fund outreach, data collection, surveys, and demonstrations for CTNAs. In addition, the awarded MPV projects will fund zero-emission car sharing programs and charging infrastructure. Application success was made possible in part to the suite of CMO technical assistance and outreach resources. Leading up to the first funding window, CMO admin interacted with interested tribal governments through dedicated one-on-one phone calls, webinars, and email. Post award, tribal governments are still able to access technical assistance and resources from the CMO admin team. Additionally, CARB is placing additional emphasis on meeting the unique needs of tribal governments as we move ahead with clean mobility investments, such as Planning and Capacity Building, and better understanding gaps in

technical assistance and outreach to allow for increased participation in CARB mobility and related programs.

Lastly, the transition to clean transportation is reliant on workers who can support new types of clean transportation vehicles and services. CARB's clean mobility programs fund workforce development activities that are intended to provide opportunities for economic and social mobility via training and high-quality jobs to community residents. CARB has also leveraged one percent GGRF State Operations funds outside of clean mobility investments to fill critical gaps in workforce training and development programs in priority populations.

Clean Mobility Investment Data

The following tables include data on each of CARB's clean mobility investments, including the information on funded projects and projected quantifiable benefits.

Table 24: Clean Mobility Investments Program Data

Projects	CARB Funds Awarded (millions)	FYs of Funding	Number of Projects Awarded	Funded Mobility Types[62]	Approximate Number of Clean Vehicles	Percent Benefit to Priority Populations
Regional Clean Mobility Projects	$23.9	2014-15; 2016-17; 2017-18; 2019-20	7	Carshare, shuttle service, volunteer ride-hailing, bikeshare/ scooter-share, public transit subsidies	1,118 (515 light-duty, 3 medium / heavy-duty, 600 bikes)	100%
Statewide CMO	$20.6[63]	2017-18; 2018-19; 2019-20	44[a]	Carshare, shuttle service, bikeshare/ scooter-share	903 (98 light-duty, 5 medium / heavy-duty, 800 bikes / scooters)	100%
CMiS	$34.6	2018-19; 2019-20; 2021-22	4	School buses, carshare, bikeshare, vanpool, public transit subsidies	94 (19 light-duty, 45 medium / heavy-duty, 30 bikes)	100%
STEP	$44.5	2019-20; 2021-22	13[b]	Carshare, shuttle service, bikeshare, local buses, public transit subsidies, bike lanes, sidewalks	744 (130 light-duty, 14 medium / heavy-duty, 600 bikes)	100%
TOTAL	**$123**	--	**68**	--	**2,859**	**100%**

[a] 24 community transportation needs assessments and 20 mobility projects.

[b] Eight Planning and Capacity Building Grants and five Implementation Grants.

[62] These pilots include funding for a significant number of project components intended to support the success of funded clean transportation services and address communities' needs, such as urban forestry, workforce development, and community engagement and outreach.

[63] $47.2M total in CARB funds has been allocated to this project, including funds for actual vouchers and for statewide administration. This includes $10M in grant amendment funding to be added from FY 2021-22 and does not include the $8M added from CEC.

Table 25: Clean Mobility Investments Projected Program Co-benefits

Project	Travel Cost Savings ($)	Net Fossil Fuel Use Reductions	Passenger VMT Reductions (miles)	Directly Supported Jobs	Indirectly Supported Jobs	Induced Jobs
Regional Clean Mobility Projects	11,196,430	886,854	21,216,843	42	23	47
Statewide CMO	17,249,797	588,324	11,306,956	113	39	69
CMiS	1,191,008	876,795	509,381	126	47	88
STEP	8,254,824	395,639	7,876,431	314	92	147
TOTAL	**37,891,059**	**2,747,612**	**40,909,611**	**595**	**201**	**351**

Regional clean mobility project user satisfaction rates are based on voluntary participant surveys and focus group discussions conducted for the projects during their implementation phase, including initial sign-up, post-trip, and general user surveys. Not all projects are operational but where there were surveys conducted by grantees, the information has been provided. In Table 26, CARB took an average of the user satisfaction rate across the three projects, where specific data was available, resulting in an average user satisfaction rate of 92 percent. CARB continues to work with clean mobility investment grantees to collect user data and participant satisfaction with the mobility services offered in communities with the goal of being able to better assess and evaluate program outcomes over time. CARB will collect the same or similar data for CMO, CMiS, and STEP, where feasible and relevant, and anticipates providing this data in future funding plans. This includes adjusting program requirements to collect additional demographic and related data in order to better understand how investments are being utilized by communities and if there are gaps in regions receiving funding or communities receiving benefits.

Table 26: Regional Clean Mobility Projects User Data and Satisfaction Rates

Project Name	Total Number of Users	Precent of Users that are Low-Income	Average User Satisfaction Rate (by percent)
Our Community Car Share Sacramento	671	100	92
City of LA Car Sharing Pilot Project	2,300	55	86
Life Line Paratransit Dial-a-Ride Electric Vehicle Transition Program	700-900	100	90
Car Sharing and Mobility Hubs in Affordable Housing Pilot Project *(not fully launched)*	N/A	N/A	N/A
Ecosystems of Shared Mobility in the San Joaquin Valley	374	100	98
Valley Air ZEV Mobility Pilot Project	66	100	Not available

Lessons Learned

Through designing and implementing clean mobility investments, CARB has learned many lessons about the successes and challenges of building equitable, sustainable projects. While not all-inclusive, the list below identifies some of the most common feedback CARB has heard and most important lessons learned so far:

- There is a significant need for additional clean mobility investments, particularly to serve the state's priority populations, as demonstrated by stakeholder demand and the significant oversubscription of all of CARB's pilots.
- The application process and requirements are too complex. CARB should identify ways to streamline the application process to make it less burdensome for communities to access funds.
- Prioritize and serve most impacted communities. CARB should consider mechanisms such as funding set-asides or tailored outreach/assistance to prioritize investments, particularly to serve priority populations. CARB should also explore alternative approaches to the current application processes piloted through CARB's clean mobility pilots. The current approaches create unique equity barriers that may be lowered through creative methods, such as phased solicitations or equity-specific funding criteria, to increase funding access for under-resourced communities and ensure that communities with greater awareness or resources are not inadvertently prioritized.
- Tailor offerings based on unique community needs. Every community is different, and flexibility is key to being able to equitably address a variety of transportation needs based on community characteristics, such as geography, community make-up, the influence of historical inequities such as redlining, and existing transportation options.
- Once CARB's initial investments end, projects may not have reached financial sustainability. CARB should work with local and state partners, including local elected officials, to identify viable options for maintaining services beyond CARB's funding terms, including through the research contract with Steer Group[64] that began in April 2022 to assess financial tools for sustaining mobility services. Access to longer-term, guaranteed funding has been a consistent need identified by current funding recipients.
- The state's insurance requirements, particularly for e-bike and scooter-share projects, pose barriers and require significant resources. CARB should continue to analyze

[64] California Air Resources Board. *White Paper: Sustainable Financing Tools and Strategies for Equitable, Community-Based Mobility and Transportation Solutions*. https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/research-solicitations/financing-clean-mobility

actual costs and liabilities for clean mobility projects and allocate more funding to meet these insurance requirements.

- There is a large community of Californians with disabilities that cannot drive, sit on the passenger seat of a regular car without assistance, or operate a regular bike or scooter. Bike sharing services often lack inclusive alternatives such as tricycles, hand-pedaled cycles, or recumbent bicycles. Addressing these issues is a crucial goal to advance equity. CARB should support funding and access to these adaptive mobility devices.
- Universal payments across mobility services are an important element of increasing the accessibility of clean transportation options, and particularly for encouraging more multi-modal trips and reducing GHG and VMT. CARB should work with Caltrans to provide resources for, and require, where relevant, funding recipients to implement transportation services that align with the Cal-ITP standardized integrated payment and trip planning systems. Using a system with global standards for collecting payment and mobility data, would also help CARB and funding recipients monitor implementation, troubleshoot issues, and collect uniform data on mobility project usage and project impacts.
- Transit subsidies are important to increase affordability and accessibility of clean transportation services, particularly for low-income residents, and to encourage behavior change to reduce VMT. CARB should work with Caltrans on ways to streamline eligibility verification for transit subsidies to make it easier to access transit discounts.
- Projects need more time and money. CARB's funding recipients are admirably handling implementation delays and increased project costs caused by inflation, the continuing COVID-19 pandemic, and other unforeseen barriers. CARB should continue identifying ways to provide needed support and resources and maintain flexibility, where feasible, to adjust project scope and offerings based on communities' transportation needs.
- Regional/local technical assistance can be especially helpful. Context-specific support can help funding applicants and recipients more efficiently and effectively. CARB should incorporate regional/local support into future technical assistance programs.
- The current statewide administrator approach in CMO has increased the state's capacity to fund clean mobility projects. However, it has also run into some challenges, such as project and payment delays. CARB is working with the statewide administrator to address these challenges and seek new opportunities for improvement as part of the second CMO application window.
- Partnership development, as projects are designed and before they are implemented, is important but resource intensive. CARB should dedicate more resources toward

early project support that helps connect to, and build strong relationships between, local partners, such as through the proposed increased funding for planning and capacity building. CARB should also continue supporting the Clean Mobility Equity Alliance and other networks, which foster much-needed partnership building and can help centralize information for CMO, CMiS, and STEP funding recipients, as well as future planning, capacity building, and technical assistance providers.

Terms and Conditions: Terms and Conditions or grant requirements where terms and conditions do not exist are provided below for the respective programs.

- CARB and the program administrator have developed Terms and Conditions to highlight the policies set forth by the Board in more detail for funding applicants, and ensure a fair, equitable, and streamlined program. More specifically, the Terms and Conditions are intended to notify applicants of the core requirements of the program prior to applying. CARB and the program administrator developed and updated an Implementation Manual, which includes the Terms and Conditions, to further define these rules, requirements, and duties.

  The 2022 updated Terms and Conditions and the Implementation Manual for the Clean Mobility Voucher Pilot Program are available on the program webpage: http://www.cleanmobilityoptions.org/implementation-manual

- **CMiS:** CARB developed grant requirements to highlight policies set forth by the Board in more detail for funding applicants and ensure an equitable and streamlined program that meets the unique needs of priority populations. More specifically, the grant requirements are intended to notify applicants of the core requirements of the program prior to applying. These are anticipated to be updated when staff update the competitive CMiS solicitation through a public process.

- **STEP:** CARB developed grant requirements to highlight policies set forth by the Board in more detail for funding applicants and ensure an equitable and streamlined program that meets the unique needs of priority populations. More specifically, the grant requirements are intended to notify applicants of the core requirements of the program prior to applying. These are anticipated to be updated when staff update the competitive STEP solicitation through a public process.

- **Planning and Capacity Building:** Terms and conditions are not available for this new program. Staff plan to provide updates through a future public process.

These documents are incorporated into the Funding Plan by reference and updated periodically throughout the year to reflect project changes after the Board adopts each funding plan and other technical or administrative changes are necessary to provide further clarity or success of the program.

Solicitations: Below is updated information for clean mobility investments funding windows and solicitations. This information is separated out by program since each is unique in their desired process.

- **CMO:** CARB released a competitive solicitation for the Statewide Clean Mobility Options Voucher Program administrator for funding available up to three years. The three years of funding have been split into two funding windows, the first one being administered in 2020. Last year, staff proposed a fourth year of funding would be added to this project. Additional funds proposed in this Funding Plan would be a fifth year of funding added for the second funding window that is anticipated to launch in late 2022 or early 2023.

  CARB staff is proposing to not release a new solicitation for a statewide administrator this year to minimize any delays in supporting community needs in this ongoing program. In future years, as additional funding becomes available for additional funding windows, CARB staff will hold a new competitive solicitation for a statewide administrator.

- **CMiS:** Staff anticipates updating the CMiS solicitation through a public process.
- **STEP:** Staff anticipates updating the STEP solicitation and proposal guidance for core elements of the program including, but not limited to, workforce development, displacement and housing, and community inclusion through a public process.
- **Planning and Capacity Building:** CARB is working to determine the funding mechanism to be leveraged and scoping requirements based on community-specific needs.

Proposed Funding Allocations

The 2022 state budget allocated a total of $381 million for clean transportation equity investments to help increase access to clean transportation and mobility options. Most funding was pre-allocated and results in a smaller clean mobility investment budget. For FY 2022-23, staff proposes to allocate $55 million to CARB's planning and capacity building and clean mobility programs as described in Table 27: Clean Mobility Investments Proposed Funding for FY 2022-23 (millions) . This proposal supports clean mobility investments that address key state goals including increasing access to clean mobility options that meet unique community needs and provide needed VMT reductions.

Table 27: Clean Mobility Investments Proposed Funding for FY 2022-23 (millions)

Program	Allocation
Planning and Capacity Building	$5
CMO	$20
CMiS	$15
STEP	$15
Total	**$55**

One of the goals of investing in clean mobility is to encourage shared rides and alternative modes of transportation to help reduce VMT by providing more clean mobility options in priority populations and increased accessibility to daily destinations. Thus, CARB staff is not proposing to develop a separate Sustainable Communities Strategies pilot and is instead

focusing on existing programs to curb growth in VMT and support the state's climate goals. CARB also continues to leverage existing research efforts to further promote sustainable communities. This includes the University of California Los Angeles Institute of Transportation Studies research contract that kicked off in March 2022 focused on how Metropolitan Planning Organizations select projects for Sustainable Communities Strategy Implementation.

CARB's clean mobility and planning and capacity building funds will be directed to disadvantaged and low-income communities throughout the state, and CARB will consider methods to identify funding gaps and prioritize investment to fill those gaps, such as in tribal governments, rural communities, and communities of color. CARB will also continue to provide one-on-one technical assistance, capacity building, training, and administrative support to applicants and awardees during the application process and project implementation, including through the current statewide administrator for CMO. CARB will prioritize regional and local approaches to outreach and technical assistance. If funding is not fully awarded in any one clean mobility or planning and capacity building program, staff recommends maintaining the flexibility to shift the funding to other equity projects that are experiencing increased demand.

Planning and Capacity Building

CARB staff proposes an allocation of $5 million in FY 2022-23 to support community-led planning and capacity building projects and dedicated, localized technical assistance and outreach. These projects are intended to improve local understanding of residents' transportation needs, channel communities to the right incentive funding opportunities, and prepare communities to implement clean transportation and land use projects. This could fund 4 larger-scale and 16 smaller-scale projects, assuming up to $2 million is dedicated for technical assistance. This includes supporting Sustainable Communities Strategy implementation, which was originally discussed as part of a Sustainable Communities Strategies pilot. This category of projects develops a foundation for organizational and community capacity building by enabling communities to identify and prioritize transportation choices that improve livability and quality of life for residents, build community wealth, and connect residents to good jobs, education, affordable housing, medical care, childcare, recreation, and healthy food options. This funding supports a variety of planning and capacity building efforts that prepare communities for engagement and implementation, including but not limited to:

- Community transportation needs and equity assessments;
- Community education, outreach, and engagement;
- Land use or transportation-focused plan development;
- Capacity building to implement new or enhance existing clean transportation planning, operations, or infrastructure projects; and
- Job assistance and workforce development programs.

CARB staff will allocate these funds through a competitive solicitation process and/or to support planning efforts by supporting or expanding existing transportation equity programs, including but not limited to Access Clean California, CMO, CMiS, and STEP.

CARB will explore opportunities for specialized and administrative support for clean mobility planning and capacity building applicants and awardees, including, but not limited to, helping funding recipients apply for clean mobility funding or find alternative funding sources to implement other community-identified projects. CARB will solicit technical assistance providers that are experts in the field of equitable transportation planning and environmental justice, and have the needed competencies to help build organizational capacity of entities pursuing planning and capacity building funding. This may be accomplished through a competitive solicitation, interagency agreements with academia, or through existing project administrators.

CMO

CARB staff proposes an allocation of $20 million in FY 2022-23 to support projects funded in the first window from 2020 and increase voucher funding for the second application window to be opened in early 2023. This could support approximately 15-25 community-driven shared mobility projects.

CMiS

CARB staff proposes an allocation of $15 million in FY 2022-23 to fund approximately 1-3 public school district grants.

STEP

CARB staff proposes an allocation of $15 million in FY 2022-23 to fund approximately 1-3 transformative, place-based implementation grants.

Proposed Changes to Project Criteria

As outlined in the descriptions above, staff are considering a handful of changes to project criteria based on lessons learned in previous rounds of funding. For CMO, staff will explore options to improve the application process, including approaches to awarding funding that prioritizes under-resourced applicants and potentially modifying the first-come, first-served component. In addition, staff proposes to expand projects' scope from smaller-scale projects to larger projects at higher funding amounts. For CMiS, staff proposes to expand project eligibility to encompass more project types, such as active transportation infrastructure, that meet the transportation needs of public school districts and the surrounding community. For STEP, staff proposes to expand community eligibility for STEP Implementation Grant funding to low-income communities – not just disadvantaged communities – and to expand lead applicant eligibility to all tribal governments – not just federally-recognized tribal authorities.

CARB staff will continue to update program parameters, solicitation materials, solicitation processes, project criteria, and technical assistance provisions based on stakeholder feedback obtained through the public work group process, lessons learned from past solicitations, implementation of pilots, and evaluations, including the Othering and Belonging

Institute's community-based transportation planning evaluation. For example, staff will work on reducing program and application complexity to make it easier for communities to access clean mobility funding. Staff will also attempt to better align requirements across CARB's clean mobility investments. For example, CARB is working to include the same terminology and definitions in program solicitations, maintain the same requirements of applicants and grantees where it makes sense and still meets the goals of the program, and align timelines and processes.

Project Evaluation and Outcomes

Grantee Data Collection and Internal Assessments

Staff are working with Grantees to collect and report project data on an annual basis and use this data to assess funding gaps. When available, this data will be reported to the public annually.

- **Estimated benefits:** CARB staff and technical assistance providers work with funding applicants to calculate GHG emission reductions and other co-benefits, such as criteria and toxics emission reductions, VMT reductions, travel cost savings, and jobs supported, before project implementation begins. California Climate Investments has developed tools to model the impacts from investments including travel cost savings[65] and jobs[66], which will be used to calculate these benefits. These estimates will then be re-calculated annually using updated inputs based on actual data from project implementation and operations.
- **Project outcomes:** Grantees are required to track data on the impact of funded projects during project implementation.
    - **Vehicle telematics data:** Grantees collect quantifiable data on project operations, such as number of users, number of trips, VMT per user and per trip, average utilization rate, and average fare cost, via vehicle telematics.
    - **User surveys:** Grantees deploy multiple user surveys over the course of project implementation to collect data that cannot be collected via telematics. This includes, but is not limited to, data such as the demographics of service users, user experience, trip purpose, alternative transportation mode if project service had not been available, pre-project travel behavior and changes in travel behavior post-project, pre-project transportation challenges and changes in transportation access post-project, and changes in perception of ZEVs and equipment post-project.

[65] California Air Resources Board. *California Climate Investments Greenhouse Gas Reduction Fund Co-benefit Assessment Methodology Travel Cost Savings.* October 2019. https://ww2.arb.ca.gov/sites/default/files/auction-proceeds/final_travelcost_am_corrected.pdf
[66] California Air Resources Board. *California Climate Investments Job Co-benefit Assessment Methodology.* May 2021. https://ww2.arb.ca.gov/sites/default/files/auction-proceeds/final_jobs_am.pdf

- **Community engagement and outreach:** Grantees track data on outreach and engagement activities, including quantitative data, such as the number of events/activities and participants reached, and qualitative data on the nature and impact of the events/activities.
- **Lessons learned:** Grantees also share lessons learned during project implementation that help CARB track and respond to overarching challenges and best practices during program implementation. This is also part of the Clean Mobility Equity Alliance process.

- **Socioeconomic benefit analysis:** CARB is continuing to collect data on and develop a process for understanding the socioeconomic benefits to clean mobility users from clean mobility projects. This will include a calculation that will incorporate the value of reliable, clean transportation and the cost savings of funded clean mobility services relative to other options. The analysis will continue to be updated and estimates refined based on stakeholder feedback obtained through a public work group process and additional grantee surveys and vehicle telematics data. Tables 28-30 provide CARB's approach to socioeconomic benefits analysis for CMO, CMiS, and STEP.

Table 28: CARB Approach to CMO Socioeconomic Benefit Analysis

Benefit(s)	Metric(s)	Evaluation Method(s)	Data Source	Reportable Outcomes
Improve priority populations' access to goods and services	Trip type/trip destination and user satisfaction on improved transportation access	Evaluate participant responses in user surveys and post-trip surveys	Voluntary participant responses to user surveys and post-trip surveys	Relative number and percentage of trips by type, such as household errands/shopping, health care, entertainment/social, work or job, school or education, religious activity, other. Report number of users and user satisfaction with the service (using a 1-5 scale rating) in improving overall transportation access and access to goods and services

Table 29: CARB Approach to CMiS Socioeconomic Benefit Analysis

Benefit(s)	Metric(s)	Evaluation Method(s)	Data Source	Reportable Outcomes
Improve students' access to schools	Number of buses deployed, number of student riders, number of trips	Analyze student ridership data	School district student transportation data	Number of student riders, number of school buses deployed, number of trips
Transportation cost savings made possible by investments	Transportation cost savings calculated by different modes from the benefits calculator	Benefits calculator	Mode data reported by the grantees	Transportation cost savings from new mobility options relative to driving, owning, and maintaining a private automobile

Table 30: CARB Approach to STEP Socioeconomic Benefit Analysis

Benefit(s)	Metric(s)	Evaluation Method(s)	Data Source	Reportable Outcomes
Improve priority populations' access to key destinations	Number of trips, trip type, and purpose, number of users, and user satisfaction	Evaluate participant responses in user surveys	Operational data provided by grantees and voluntary participant responses to user surveys	Number and percentage of trips by type, number of users and user satisfaction with the service (e.g., using a 1-5 scale rating) in key destinations
Transportation cost savings made possible by investments	Transportation cost savings calculated from the benefits calculator	Benefits calculator	Transportation fare and mode data reported by the grantees	Transportation cost savings from new mobility options and subsides relative to driving, owning, and maintaining a private automobile

- **Investment gap assessment:** CARB has begun to map the locations of funded mobility projects to assess where there may be funding gaps that clean mobility and planning and capacity building funding should address. Staff are also exploring other ways to identify who is benefitting from funded projects and where funding gaps may occur, such as collecting and analyzing data on the demographics of clean mobility service users.

Statewide Administrator and Technical Assistance Evaluations

The CMO statewide administrator and the STEP technical assistance provider have both shared recommendations on their respective pilots' funding approaches and project support:

- **CMO-funded community transportation needs assessments:** The Shared-Use Mobility Center, a member of the CMO statewide administrator team, is conducting a process evaluation of the 24 community transportation needs assessments funded via the pilot's first application window. This assessment measures and reports the degree to which the voucher process went according to plan, how awardees received the program, and to what extent the awardees felt the process prepared them to complete the requirements necessary to apply for an MPV, and if they plan to do so. Preliminary evaluation results indicate that 87 percent or 21 awardees reported that the overall process adequately prepared them for the next phase of applying for an MPV. Currently, 15 of the 24 needs assessment awardees plan to apply for an MPV when funding becomes available.
- **STEP solicitation and technical assistance:** Estolano Advisors, the lead technical assistance provider for the first STEP solicitation, developed an interim technical assistance report[67] based on feedback from STEP applicants and from entities that were interested but did not end up submitting applications. The report details the outcomes of the solicitation and recommendations for improving the solicitation process and technical support offered. They also developed a final technical assistance report (to be published) based on feedback from the STEP Implementation Grantees and technical assistance team that outlines lessons learned from the first nine months of project implementation. Recommendations in both of these reports will inform future STEP solicitations and project implementation.

Evaluation Contracts

CARB has two contracts intended to evaluate implementation of a portion of CARB's clean mobility and planning investments:

- **Clean mobility project evaluations:** CARB has a contract with UC Berkeley's Transportation and Sustainability Research Center to evaluate up to 12 funded clean mobility projects from CARB's regional clean mobility projects, CMO mobility project vouchers, and STEP Implementation Grants. The original contract was approximately $1,000,000 from FY 2018-19, which was augmented by $500,000 from FY 2019-20 for a total of $1.5 million in one percent GGRF State Operations funds. UC Berkeley's Transportation and Sustainability Research Center is currently developing evaluation frameworks for CARB's clean mobility projects, which will help create a standard method for assessing the effectiveness, sustainability, and outcomes of funded projects. The Transportation and Sustainability Research Center will then work with the

[67] Estolano Advisors. *STEP Technical Assistance Interim Report*. September 2021. https://ww2.arb.ca.gov/sites/default/files/2021-09/081321_step_interim_report_to_post.pdf

funding recipients to gather data via vehicle telematics and user surveys and assess project impacts on mobility, accessibility, GHGs, and VMT, among other metrics. Researchers also plan to facilitate post-assessments with funding recipients and community stakeholders to discuss and reflect on community engagement activities, challenges, and best practices. A summary of key findings and lessons learned will be provided in 2023 and a final report will be published in 2024. Lessons learned will inform future policy recommendations for CARB's clean mobility programs.

- **Community-based transportation planning evaluations:** CARB has a contract with UC Berkeley's Othering and Belonging Institute to evaluate existing practices and develop recommendations for equitable, community-based transportation planning, including community transportation needs assessments. The original contract was approximately $700,000 from FY 2019-20 which was amended by $325,000 from FY 2021-22 for a total of $1 million in one percent GGRF State Operations and GGRF contract funds. The Othering and Belonging Institute is currently evaluating the community engagement and needs assessment approaches taken by the CMO community transportation needs assessment voucher recipients and the STEP Planning and Capacity Building grantees. Research methods include approaches that ensure the people who will be impacted by the evaluation can play integral roles in the design, coordination, and execution of the evaluation activities and that their knowledge is incorporated into evaluation findings. The contract kicked off in late 2021. The Othering and Belonging Institute's final discovery report will be published in 2023 and will be followed by a detailed equity recommendations report and final evaluation. Recommendations from the Othering and Belonging Institute will inform state and CBO approaches to advancing transportation equity, ensuring equity of investments, and maximizing impact beyond CARB's investments.

AB 1550 Disadvantaged Community and Low-Income Household/Community Benefits:

- **CMO:** Consistent with FY 2018-19 project requirements, all projects funded by CMO must benefit residents of disadvantaged communities, low-income communities, and tribal governments. Because AB 1550 prohibits "double counting" investments for determining compliance with minimum disadvantaged community and priority populations/community targets, staff will not count any of the CMO funding as being within and benefiting priority populations even though staff expects some of the funds will meet those criteria as well.
- **CMiS:** The FY 2018-19 CMiS solicitation required all funds awarded for CMiS to be located in and benefiting disadvantaged communities. This requirement will continue for FY 2022-23 funds. Staff is proposing to expand project eligibility to encompass more project types, such as active transportation infrastructure, that meet the transportation needs of public school districts and the surrounding community. These program improvements are anticipated to expand future community benefits for priority populations. Because AB 1550 prohibits "double counting" investments for determining compliance with minimum disadvantaged community and low-income

household/community targets, staff will not count any of the CMiS funding as being within and benefiting low-income communities or benefiting low-income households where they overlap even though staff expects some of the funds will meet those criteria as well.

- **STEP:** In the FY 2019-20 Funding Plan, staff proposed that all funds allocated for STEP Implementation Grants benefit disadvantaged communities. Staff is proposing to expand project criteria to also include projects that benefit priority populations within AB 1550 designated areas and to all tribal governments – not just federally-recognized tribal authorities – when within a low-income or disadvantaged community. These program improvements are anticipated to expand future community benefits for priority populations.
- **Planning and Capacity Building, Workforce Training and Development:** This project is intended to make it easier for low-income households and low-income and disadvantaged communities to access Low Carbon Transportation Incentive funding and thus supports the AB 1550 goal of increasing investments in priority populations. This program is anticipated to spur ZEV adoption by low-income and disadvantaged residents in priority populations through existing incentive projects, such as CVRP and Financing Assistance for Lower-Income Consumers through increased community awareness and capacity building of CARB programs, as well as support existing clean mobility investments, such as the CMO, CMiS, and STEP. Therefore, staff is not quantifying any direct emission reductions for this project. Instead, this project is expected to help achieve the emission reductions projected for CARB's clean vehicle ownership and clean mobility investments.

  Staff is estimating that all of the proposed funding will directly benefit priority populations through capacity and partnership building and anticipates all funds will benefit priority populations with a breakdown of 50 percent benefiting low-income and 50 percent benefiting disadvantaged communities. Further refinement to benefits will be made as the program gets up and running and CARB assesses actual program benefits.

Workforce Training and Development

Proposed–$0
Projects are ongoing and future funding is anticipated through Clean Mobility Investments

Project Overview and Goals

The goal for investment in workforce training and development is to implement SB 350 Guidance Document recommendations to maximize economic opportunities for priority populations and support equity principles as the state transitions to a zero-emission economy. This includes expanding and increasing connections to good quality clean transportation jobs, bridging gaps in access to workforce development programs for youth and adults, job training, and career advancement opportunities, maximizing investments that address community-identified needs, and economic recovery through direct workforce training and development investments in communities. These investments further support zero-emission technology access, education, awareness, and development in the communities where CARB-incentivized ZEV deployment is occurring. Additionally, these workforce investments build on CARB's mobility program lessons learned, such as the importance of providing guidance for strengthening workforce elements and more specific workforce requirements such as provisions for local hiring. CARB is working to identify how it can provide further guidance to strengthen these workforce equity principles in the light-, medium-, and heavy-duty sector. CARB has partnered closely with those that have worked for decades to design and implement workforce programs, such as CEC, to learn from their experiences, complement their existing investments such as for ZEV manufacturing and zero-emission infrastructure, and to maximize economic and social benefits in the most impacted and overburdened communities.

Current Project Status

Workforce training and development is an increasingly important focus for CARB in meeting clean mobility investment goals. Over the past few years, CARB has allocated funding for various workforce training and development efforts. CARB is working in close partnership with CEC to implement the IDEAL ZEV Workforce. This is a new project, which released a competitive solicitation in October 2021 with project implementation beginning in Summer 2022. IDEAL ZEV Workforce provides $1 million in CARB's FY 2020-21 one percent GGRF State Operations funds through an interagency agreement and over $5.5 million in CEC Clean Transportation Program funds. IDEAL ZEV Workforce supports large and small training and education community investments for ZEVs, charging and fueling infrastructure, and ZEV-related commercial technologies statewide, including community and employer engagement with pathways toward clean transportation jobs. CARB anticipates incorporating lessons learned from working with grantees on community-based projects statewide through existing and future clean mobility investments. CARB is working with CEC to determine IDEAL ZEV Workforce Projects that could be readily replicated in other areas of the state to maximize existing program benefits and scale up these workforce investments in priority populations.

CARB anticipates allocating an additional $1 million in FY 2021-22 one percent GGRF State Operations funding to replicate existing IDEAL ZEV Workforce Pilot projects in other communities based on lessons learned or support pre-apprenticeship programs.

CARB has also allocated $1.5 million in FY 2021-22 funding to support existing ZEV and technology vocational and adult school programs, including connections to CBOs supporting upskilling and economic independence. This investment directly addresses the community needs identified in the SB 350 Guidance Document for access to workforce training programs, including for youth, that enable communities to be an essential part of the transition to zero-emission employment. This investment supports CARB's equity goal of expanding benefits of clean mobility investments and partnerships beyond state agencies to non-traditional workforce partners rooted in communities. CARB plans to develop a new competitive solicitation and open an application window by early 2023. Funding will focus on existing ZEV and clean technology vocational and adult school programs to increase priority communities' access to training, education, and workforce development opportunities, including promoting replication to other areas of the state.

To date, $1.075 million in FY 2021-22 one percent GGRF State Operations funding has been allocated to co-create a new transportation electrification pre-apprenticeship program based on lessons learned from IDEAL ZEV Workforce projects and broader needs and gaps identified including with other state and local workforce and economic development partners and the desire to support high-road training principles. This effort will be done in close collaboration with other state agencies that have dedicated funding for pre-apprenticeship and related programs, such as CEC, CWDB, and the Employment Training Panel, through an interagency agreement. CARB is working with partners to determine project scope and specific community-identified needs through late 2022 and anticipates entering into an agreement by mid-2023.

CARB is prioritizing workforce training and development through existing clean mobility pilots and heavy-duty demonstrations. This includes support for future clean transportation needs, such as ZEV repair, charging infrastructure installation and required certifications such as EVITP, and broader education and awareness. CARB continues to, work with state partners to understand the full landscape of workforce training and development investments and where additional emphasis is needed to support the specific needs of those that would benefit most from these investments in underserved communities, meet our goals to support ongoing economic recovery, and accelerate the transition to zero-emission. CARB is also engaging with the workforce development community, including colleges, economic development organizations, non-traditional, and grassroots organizations rooted in the communities they serve, to more directly address future workforce needs, including outreach, and to support the zero-emission economy.

Proposed Funding Allocation

Staff is not proposing standalone workforce training and development funding for FY 2022-23. CARB is focused on leveraging and collecting lessons from the IDEAL ZEV Workforce project, FY 2021-22 $1.5 million allocation to support multiple existing ZEV and technology vocational and adult school programs, and clean mobility investments. Through

the new Planning and Capacity Building project category, CARB anticipates further supporting and funding community identified workforce needs, such as job assistance and workforce programs.

Potential Changes to Project Criteria

Staff is not proposing any substantial changes to workforce training and development.

Project Evaluation and Outcomes

Workforce projects are being designed to increase awareness of CARB's clean mobility investments and expand participation by low-income households and low-income and disadvantaged communities. These investments spur ZEV adoption and can support access to zero-emission infrastructure in priority populations through existing incentive projects. Because this is an "enabling" project, CARB staff is not quantifying any direct emission reductions for this funding. Rather, this project helps support the emission reductions anticipated for light-duty and heavy-duty investments, as well as clean mobility and infrastructure projects, which are quantified in those sections of the Funding Plan. However, it is still important to measure the success of this project. CARB will report the outcomes of this project in Annual Reports and future Funding Plans. Staff proposes to use metrics such as number of trainees, number of certificates obtained, number of jobs created, as well as outreach metrics to keep track of the number of outreach events, training sessions, and networking workshops, as well as capacity building metrics, such as the increase in low-income residents and priority populations accessing Low Carbon Transportation Investment project funds. CARB will also encourage or perhaps require the grantee to develop surveys of participants as a way to determine how well the project is working and determine whether program refinements are needed.

As CARB expands investments that support a green workforce CARB staff will work with state and local partners and communities to determine a process to define, collect, and use data to measure and report on these investments. This includes identifying direct and measurable community benefits, such as socioeconomic, job access, zero-emission technology and environmental literacy, and other quality of life and social impact improvements. This evaluation effort will be done in parallel with CARB's other clean transportation and mobility investments to determine relevant data and lessons that can be applied across programs. Central to CARB's evaluation strategy and metrics assessment is intentional and meaningful community engagement throughout the process. This includes soliciting and elevating ideas on how CARB and our partners should measure and report workforce training and development benefits and providing strong feedback loops for policy and program adjustments based on findings. Similar to the workforce investment itself, this effort to measure, analyze, reporting, and share lessons on workforce benefits and outcomes is being done in close collaboration with CEC and other partners.

AB 1550 Disadvantaged Community and Low-Income Household/Community Benefits: This project is intended to expand and increase priority population connections to good quality clean transportation jobs, training opportunities, and career development in their communities, and thus supports the AB 1550 goal of increasing investments in priority populations. Focused investments will ultimately help to increase workforce and economic

opportunities for priority populations through the implementation of CARB's clean mobility investments and ZEV deployment projects.

Chapter 4: On-Road Heavy-Duty Vehicle & Off-Road Equipment Investments

Overview

Zero-emission technologies in the heavy-duty space have advanced rapidly over the past several years and are now experiencing significant growth in demand, fueled in part by the historic investments approved in the 2021 ZEV Acceleration Package. New advancements are expanding technology options and reaching new market segments, supporting the transformation of the on-road and off-road fleet to zero-emission to help meet California's ambitious air quality and climate change goals. As planned and approved regulations continue the push for widespread adoption of zero-emission technologies, incentives play an increasingly important role in supporting the small businesses and fleets that would be challenged to purchase new vehicles or equipment without financial assistance.

This section of the Funding Plan describes the proposed heavy-duty vehicle and off-road equipment (heavy-duty) investments to be funded through Clean Transportation Incentives. Staff is providing an overview of CARB's heavy-duty investments in the context of the Long-Term Heavy-Duty Investment Strategy and the current technology and market landscape followed by preliminary funding recommendations for, and descriptions of, the following projects:

- Advanced Technology Demonstration and Pilot Projects
- HVIP
- CORE
- The Truck Loan Assistance Program
- The Zero-Emission Truck Loan Pilot

CARB's strategy for heavy-duty investments enables progress toward state climate change and air quality goals, while promoting equity by ensuring that investments benefit the communities most impacted by poor air quality and provide assistance to small fleets and owner-operators.

Equitable Investments for Widespread Adoption of ZEVs

The successful deployments of zero-emission truck and bus technologies from early investments have been instrumental in advancing the zero-emission on-road vehicle market to where it is today, with a wide array of vehicles and equipment on the commercial market. More recent investments in the development and demonstration of zero-emission off-road vehicles and equipment have resulted in a growing list of commercial products in the

off-road sectors. Continued commitment to these markets in the form of commercial incentives, as well as funding for demonstration and pilot projects, will play a critical role in:

- Meeting California's air quality and climate goals.
- Achieving vehicle and equipment deployment targets.
- Ensuring all Californians experience improved air quality and have access to clean transportation incentive programs, particularly priority populations.
- Helping small fleets and businesses make the transition to zero-emission.
- Supporting high-quality jobs.
- Enhancing California's leadership role as an incubator and marketplace for clean, zero-emission technology.

Executive Order N-79-20 sets a goal to transition all drayage trucks to zero-emission by 2035, all off-road equipment to zero-emission where feasible by 2035, and the remainder of the medium- and heavy-duty vehicles to zero-emission where feasible by 2045. In addition, the Executive Order directs CARB to develop regulations to make these targets a reality and to work with other agencies to develop and propose strategies to achieve 100 percent zero-emission off-road vehicle and equipment by 2035 where feasible. The *California Zero-Emission Vehicle Market Development Strategy*[68] establishes priorities, roles and responsibilities of state agencies and private stakeholders to achieve the goals of Executive Order N-79-20 and advance the ZEV market to scale.

To achieve these widespread ZEV adoption targets, all fleets, including small fleets and fleets facing financial challenges must be able to access zero-emission technology. This year, CARB's proposal continues to build on previous efforts to ensure that investments are equitably distributed. Following the direction of SB 372, CARB is exploring additional financial and non-financial mechanisms to support the transition to ZEVs. For example, the recently launched Innovative Small e-Fleets pilot in HVIP explores new methods to help small fleets and independent owner operators make the transition to zero-emission. In addition to policy changes within our existing heavy-duty incentive projects to expand equity efforts, staff proposes to introduce the new Zero-Emission Truck Loan Pilot to help provide fair financing to fleets looking to make the transition to zero-emission trucks. CARB is also investigating non-financial mechanisms and ways to assist fleets, including expanded outreach, education, and technical assistance, and is coordinating with state agency partners, communities, and fleets to better understand how we can collaborate to support the total transformation of the transportation sector.

Staff has heard requests from community members to share data on the demographics of those individuals and businesses who have received our incentives. Historically, some projects have collected limited data on if businesses supported by heavy-duty investments

[68] California Governor's Office of Business and Economic Development. *California Zero-Emission Vehicle Market Development Strategy*. February 2021. https://static.business.ca.gov/wp-content/uploads/2021/02/ZEV_Strategy_Feb2021.pdf.

are classified as disadvantaged business enterprises, or are minority owned, or women owned, and some incentives such as HVIP have begun to collect data on the revenue of businesses that receive incentives. Where such data is available for projects, it has been reported in the project background. Staff are working to expand the data requested and expect to begin to collect more demographic data for our heavy-duty purchase incentives such as HVIP and CORE within the next year.

Another critical step to achieve these ZEV adoption targets is working with state and local partners to expand workforce training and development opportunities in priority populations. Lessons learned from the IDEAL ZEV Workforce Pilot Project with CEC can provide insights into future community needs and workforce training and development investment opportunities to increase access to and awareness of zero-emission technology and applications. CARB will continue to explore strategies to strengthen and expand workforce training and development opportunities within medium- and heavy-duty incentives.

As costs continue to decline and technologies expand, incentives will phase out of some markets as they mature, or incentives will refocus on priority fleets and the small fleets and businesses most in need of financial support. Regulations that require cleaner vehicle technologies provide long-term market certainty and continued growth in the market. The following regulations are a key part of CARB's strategy to support cleaner technologies through a strategic combination of incentives and regulations:

- Innovative Clean Transit regulation, adopted December 2018.
- Zero-Emission Airport Shuttle Bus regulation, adopted June 2019.
- Advanced Clean Trucks regulation, adopted December 2020.
- Heavy-Duty Omnibus regulation, adopted August 2020.
- Commercial Harbor Craft Regulation Amendments, adopted March 2022.
- Upcoming Advanced Clean Fleets, Zero-emission Transport Refrigeration Units and Seaport and Railyard Cargo Handling Equipment regulations.

Compliance with Labor Standards

In line with the requirements of AB 794, all drayage and short haul trucking fleets receiving CARB incentives must be in compliance with applicable labor standards. Funding programs, including demonstrations, pilots, commercial incentives, and truck loan programs will be structured to ensure that fleets receiving grants, loans or other financial assistance attest to CARB that they are and will continue to be in compliance with applicable labor laws for the duration of the project. In addition, CARB will not award funding to applicants that are on the publicly-available noncompliance list maintained by the Division of Labor Standards Enforcement under Section 2810.4 of the Labor Code.

Proposed Allocations

For FY 2022-23, the state budget includes $600 million in Low Carbon Transportation funding for heavy-duty vehicle and off-road equipment projects, which is augmented by $280 million from the General Fund to support the deployment of zero-emission transit buses, school buses, and drayage trucks. This year the budget included a total of $60 million from GGRF and General Fund to reduce emissions from commercial harbor craft subject to regulation. Additionally, AB 181 provided CARB an additional $1.125 billion from Proposition 98 General Funds for grants to local educational agencies to support the replacement of internal combustion school buses between FY 2023-24 and FY 2027-28. Additionally, the state budget includes $28.64 million in AQIP funds. Finally, amendments to the FY 2021-22 state budget added $82 million for drayage trucks and $53 million for emerging opportunities to support ZEVs and equipment. Staff's proposed FY 2022-23 allocations are shown in Table 31.

Table 31: Proposed FY 2022-23 Heavy-Duty Vehicle and Off-Road Equipment Project Allocations (Millions)

Project Category	Low Carbon Transportation	General Fund	Proposition 98 General Funds	AQIP	Total Allocation
Clean Truck and Bus Voucher Incentive Project (HVIP)	-	-	-	-	-
HVIP Standard	$265	-	-	-	**$265**
HVIP–Public Transit Buses	-	$70	-	-	**$70**
HVIP–Public School Buses	-	$135	$1,125	-	**$1,260**
HVIP–Drayage Trucks	-	$157	-	-	**$157**
HVIP–Innovative Small e-Fleets Pilot	$35	-	-	-	**$35**
CORE	$273	-	-	-	**$273**
Advanced Technology Demonstration & Pilot Projects	$22	$53	-	-	**$75**
Demonstration and Pilot Projects—Commercial Harbor Craft	$20	$40	-	-	**$60**
Truck Loan Assistance Program	-	-	-	$28.64	**$28.64**
Zero-Emission Truck Loan Pilot	$5	-	-	-	**$5**
Total	**$620**	**$455**	**$1,125**	**$28.64**	**$2,228.64**

*FY 2021-22 funding for emerging opportunities within zero-emission vehicles, zero-emission vehicle components, and zero-emission vehicle charging or refueling as described in AB 211.

The following section provides more information on each of these projects as well as on the Long-Term Heavy-Duty Investment Strategy and updates to it this year.

Summary of Changes to the Long-Term Heavy-Duty Investment Strategy

CARB developed the first three-year long-term investment strategy to serve as a strategic roadmap, showing how best to focus the investment of Low Carbon Transportation funds in heavy-duty vehicle and off-road equipment incentives so that they can have the greatest impact. Each year, staff has updated this document through a public process, using stakeholder input while laying out the agency's goals, analyzing the factors affecting the efficacy of projects, and presenting a thoughtful strategy detailing how to best use incentives

to support the state's goals to transition the heavy-duty fleet. The result of the process was the initial Three-Year Investment Strategy for Heavy-Duty Vehicles and Off-Road Equipment.

This document, now renamed the Long-Term Heavy-Duty Investment Strategy, generally includes three key components: technology status snapshots that show progress to date toward commercialization and market acceptance; a discussion of the beachhead model that describes the avenues for technology transfer; and a three-year investment priorities table that details staff's assessment of individual priorities and estimated funding needed to ensure continued progress toward overall commercialization and market transformation goals.

This strategy serves as a guide to better focus available resources to the places where they can make the most progress towards meeting California's long-term air quality, climate, and equity goals. This year, as in prior years, staff has updated the core components of the Strategy that are most applicable to achieving its mission and purpose.

Technology Status Snapshots

Technology has continued to advance rapidly in the heavy-duty vehicle and off-road equipment space since the development of the first Funding Plan for Low Carbon Transportation and AQIP. Knowing where key technologies are on their path to commercialization results in better informed and more strategic funding considerations. Accordingly, this year's Long-Term Heavy-Duty Investment Strategy includes an annual update to the snapshots of these core technologies and applications.

Technology Pathway Beachheads

The concept of beachheads serves as the foundation of CARB's heavy-duty investment strategy. In this context, beachheads are early successful vehicle applications where the pathway technologies can best establish initial market acceptance. Under the beachhead model, these applications then continue to advance and seed additional adjacent market applications. CARB has worked with its partners, including CALSTART, to better understand how vehicle technology evolves and transfers between applications, transforming this understanding into a theory of change for heavy-duty transportation technologies.

CARB works in partnership with stakeholders to update the beachheads as it further integrates off-road technologies and other emerging opportunities into the beachhead model and into the Long-Term Heavy-Duty Investment Strategy more broadly. These updates help to focus and prioritize investment in critical on- and off-road applications and lead to further acceleration of technology commercialization for the entire heavy-duty sector.

Three-Year Investment Priorities Table

Many of the key findings from the Long-Term Heavy-Duty Investment Strategy are summarized in the three-year investment priorities table, which contains CARB's top priorities for the upcoming three FYs (not including the current year) for Low Carbon Transportation funds. As is done each year, staff has added a new third year (FY 2025-26) to the table along with proposed funding levels for technologies in the demonstration, pilot, and commercial incentive categories. Minor changes have been made to the other years to acknowledge

shifts in technology, projects currently receiving state investments, and the subsequent impacts to investment priorities.

Other Updates

- **Metrics of Success:** Each year's update to the Strategy document has highlighted the need to define key metrics needed to more effectively set goals, establish priorities, and assess progress. Staff identified three broad categories that are used to define success: supporting healthy communities; growing the green economy; and supporting technology evolution. CARB jointly developed a set of metrics with stakeholders—using data already being collected from existing incentive programs—to construct a meaningful set of evaluation tools. These include measures such as clean VMT, investments in California's priority populations, the number of incentive vouchers issued by technology type, private funding leveraged by public investments, the number of participating advanced technology manufacturers, as well as other technology and market readiness indicators. These same metrics have been updated for this year's Strategy, and staff have also included a qualitative discussion of other potential metrics to be considered for inclusion, including those that specifically help to support CARB's equity goals, as discussed below.
- **Equity:** Equity continues to be a key component of each year's update; the update for FY 2022-23 further expands the critical role of equity in shaping the heavy-duty investment strategy more broadly. This is reflected in an ongoing shift of CARB's heavy-duty commercial incentives from a first-come, first-served model to a more strategic focus on equitable investments with priority populations and small fleets and businesses. While continuing to quantify the scope of heavy-duty investment benefits to priority populations, CARB will work closely with stakeholders and communities, using a coordinated approach across light-duty and heavy-duty investments, to identify priority investment areas, as well as metrics that can better demonstrate the benefits and co-benefits of incentive funding.
- **Industry Examples:** As in prior years, CARB has included a series of industry examples, or mini case studies, which are designed to illustrate specific examples where industry is adapting to meet specific needs for heavy-duty investments. For this year, examples include narratives that discuss such areas as zero-emission facilities or ecosystems, "electrification as a service" business models, battery-electric locomotives, zero-emission transit buses, and driver health improvements from ZEVs.

SB 1403 School Bus Report Updates

In 2018, the Legislature passed SB 1403, formalizing the Long-Term Heavy-Duty Investment Strategy and adding to it a report on the state's school bus population and funding needs. This year's report follows a similar outline as last year's report and provides an update to state school bus funding programs, the state school bus inventory, and a discussion on achieving statewide zero-emission school bus goals by 2045.

Significant progress continues to be made to clean up the State's school bus fleet and transition to zero-emission school buses. Of the 23,800 school buses operating in California approximately 52 percent are diesel.

The State has spent or allocated approximately $254 million to school bus cleanup since last year's update, bringing the total to date to $1.2 billion. In addition, the Legislature appropriated additional funds totaling $1.8 billion over the next 5 FYs. CARB and CEC have also made progress making it easier for school districts to access vehicle and infrastructure incentives in a streamlined manner. Turnover of all publicly owned school buses over by 2045 at a rate of 4 percent turnover per year would require an investment of up to $270 million annually (not including infrastructure costs, total cost of ownership savings, or additional training/support). California school districts will continue to need more funding and support each year to continue to continue the turnover and cleanup of the school bus fleet.

The report also includes case studies from school districts that have incorporated zero-emission school buses into their fleet. The report was developed via a public process and in coordination with the CEC. Additional partners include local air districts, school districts, zero-emission school bus manufacturers, and state utilities. Staff's full report can be found in Appendix E of this Funding Plan.

Advanced Technology Demonstration and Pilot Projects

Proposed General Fund Allocation–$93 million
Proposed Low Carbon Transportation Allocation–$42 million

Project Overview and Goals

Heavy-Duty Vehicle and Off-Road Equipment Demonstration and Pilot Projects are uniquely designed to take advantage of emerging opportunities. These projects are intended to accelerate the introduction of advanced emission reducing technologies that are on the cusp of commercialization into the California marketplace. They can utilize technologies already developed and in the demonstration phase that align with the state's goals to reduce emissions.

Since the inception of the program in 2009, new and exciting projects have demonstrated advanced vehicles and equipment that have graduated into commercialization, with widespread adoption happening now for many technologies, such as zero-emission yard tractors and zero-emission school buses. Zero-emission on-road heavy-duty trucks are now market-ready, and with steady advancements in infrastructure capability and battery capacity, the range of duty cycles for these trucks is expanding rapidly. Facility-wide transformations

Advanced Technology Demonstration and Pilot Projects At A Glance…

- Over $401 million invested
- 700+ clean vehicles and equipment funded
- 99 percent of funding benefits disadvantaged communities
- 642 tons of NOx reduced in disadvantaged communities
- 18 tons of PM2.5 reduced in disadvantaged communities
- Technical training programs and curriculum at eight local community colleges and three high school districts

Figure 20: Funded Demonstration & Pilot Projects

Data through June 30, 2022

towards zero-emission are showcasing the economic and environmental benefits of heavy-duty vehicles and equipment in a more holistic way.

Demonstration projects help to accelerate the introduction of advanced technologies into California by pushing technology advancement toward commercialization. In this first phase of CARB investments per-vehicle or equipment incentives are high because manufacturing is not standardized and is focused on developing and testing technologies with businesses. Higher levels of incentives per vehicle are needed to help companies cover the costs of technology development, deployment, and support infrastructure installations. A public investment in these technologies helps to achieve GHG reductions, as well as criteria pollutant and toxic air contaminant reductions 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 in the on- and off-road sectors. All funded projects must have the potential for widespread commercialization and be significantly transformative while achieving GHG, criteria pollutant, and toxic emission reductions as required by SB 1204, SB 1403, and AB 2285 with nearly all of the funding being spent in priority populations. Once demonstration projects reach the goal of market availability, longer term future emission reductions in considerably larger magnitudes can be achieved by moving these technologies to the pilot phase of commercialization. That is happening now with the joint CARB and CEC drayage truck pilot project, which has awarded funds for 280 zero-emission heavy-duty trucks, with many of those being deployed in 2022, and continuing on in 2023. These types of projects are important sources of data on vehicle and infrastructure performance and showcase the technologies for other end users of similar vehicles or equipment, increasing the potential for accelerated emission reductions in disadvantaged communities where many freight operations are located.

Demonstration and pilot projects by their nature include workforce training elements. This is needed to support the deployment of advanced technology vehicles and equipment at an end-user fleet. All funded projects will be required to have workforce training component to ensure that workers are prepared to use and service all advanced technology vehicles, equipment, and infrastructure.

Current Project Status

Over the past 6 years, CARB has funded over 30 heavy-duty and demonstration and pilot projects with approximately $440 million in incentives leveraging an equal if not larger sum contributed by the hundreds of implementing project partners, including many California businesses utilizing these technologies every day. Funded projects include large deployments of clean heavy-duty trucks and cargo handling equipment, solar and energy management system installations, electric agricultural tractor demonstrations, and zero-emission commercial harbor craft. CARB's demonstration and pilot projects are located in disadvantaged and low-income communities reducing emissions directly in the most impacted communities. Detailed summaries of all of CARB's heavy-duty demonstration and pilot projects funded to date can be found on the Moving California website.[69]

[69] https://www.arb.ca.gov/msprog/lct/projectheavyduty.htm

The solicitation and selection process for the third-party administrator is currently underway. It is expected that the third-party administrator will help facilitate the solicitation for the FY 2022-23 projects. The solicitation for demonstration and pilot project categories approved in the FY 2021-22 Funding Plan will be released soon.

Workforce training components of existing demonstration and pilot projects are starting to graduate skilled technicians into the marketplace. Students attending such programs at Rio Hondo College and San Bernardino Valley College have marketable skill sets to start work on zero-emission drive systems. Other projects have set up curriculum and classes in Long Beach, Oakland, and Stockton with high schools and community colleges developing vocational training for tomorrow's workforce.

Project Solicitations: Staff proposes that Advanced Technology Demonstration and Pilot Projects utilize a competitive process where eligible applicants can apply for project funding. Eligible applicants are public agencies, and California based non-profits. Specific details regarding solicitation requirements will be developed through the public work group process after Board approval of the Funding Plan. Staff is considering allowing the use of the FY 2022-23 allocation to fund additional projects through the FY 2021-22 Advanced Technology Demonstration and Pilot Project solicitation, where there are overlapping categories such as Green Zones or Zero-Emission Rail.

Proposed Funding Allocation

CARB's Long-Term Heavy-Duty Investment Strategy laid out a roadmap showing how much heavy-duty incentive funding would be needed over the next 3 years to put the state on a trajectory to meet its ZEV adoption and emission reduction goals. Taking into account those targets and other funding priorities, staff is proposing allocating $75 million to support demonstration and pilot projects—this includes the proposed $53 million General Fund line item for Emerging Opportunities and $22 million from Low Carbon Transportation Investments. Additionally, staff proposes to include $60 million for Commercial Harbor Craft regulatory support as appropriated in AB 179. Staff is proposing the following demonstration and pilot project categories:

- **Green Zones:** Zero-emission holistic projects that could be focused on almost any operations within a city, municipality, or group of cities that currently use combustion technologies in carrying out the duties of the municipality. Projects will showcase zero-emission technologies while overcoming challenges to adoption through activities such as streamlining infrastructure permitting and determining what systems need to be in place for a municipality to foster widespread zero-emission technology adoption. Projects must directly reduce emissions but may also include funding to support a robust local public process, updates to local ordinances and other requirements, and should encourage other cities to adopt Green Zone policies within their jurisdictions. Projects could include roadway and vehicle telematics, targeted incentives for public and private vehicles, large scale zero-emission commercial lawn and garden equipment for schools and/or parks and recreation departments, zero-emission construction equipment, zero-emission waste collection and other functions that are performed by a municipality that can be converted to zero-emission.

Projects in this category will score higher if they are located in or benefit a disadvantaged or low-income community.

- **Zero-Emission Rail:** Demonstration or pilot of zero-emission rail technologies that can operate in intrastate line haul, short haul and switcher operations without requiring additional diesel locomotives in the consist. Projects in this category will be required to be located in or benefit a disadvantaged community.
- **Zero-Emission Capable Commercial Harbor Craft**: Demonstration or pilot of zero-emission capable commercial harbor craft with a focus on California small businesses. Projects in this category will be required to be located in or benefit a disadvantaged or low-income community.
- **Port Vehicles and Equipment:** Demonstration and pilot of on-road trucks engaged in drayage service and cargo handling equipment used at ports. Projects in this category will be required to be located in or benefit a disadvantaged or low-income community.
- **Zero-Emission Aviation and Ground Support Equipment**: Demonstration and pilot of zero-emission aircraft and ground support equipment. Focus will be on aircraft for short-haul routes within California and support equipment. Projects in this category will be required to be located in or benefit a disadvantaged or low-income community.
- **Off-Road Construction and Agriculture Equipment**: Demonstration and pilot of zero-emission construction and agriculture equipment along with supporting infrastructure. Demonstration of advanced technologies and pilots for larger scale deployments of zero-emission equipment will be supported. Projects in this category will score higher if they are located in or benefit a disadvantaged or low-income community.
- **Tier-4 Commercial Harbor Craft**: Projects that maximize emission reductions from vessels subject to CARB's Commercial Harbor Craft regulation. A portion of the funding will be prioritized for private ferry operators regulated by CPUC, and the remaining funding will be prioritized for public ferries, licensed commercial passenger fishing vessels, research vessels and excursion vessels. Staff will discuss further details of how these funds will be implemented and how much will be set aside for private ferries through a public work group process. Technologies can include Tier-4 engines with diesel particulate filters, or zero-emission capable marine technologies. The Legislature's $60 million allocation will used to support this project category, which includes $20 million from GGRF which will require some projects funded under this category to also provide GHG emission reductions. Projects in this category will score higher if they are located in or benefit a disadvantaged or low-income community.

CARB is collaborating with CEC on infrastructure aspects of the proposed project categories where possible, which could include a joint solicitation for one or more of the proposed project categories.

Proposed Changes to Project Criteria

Staff is not proposing any substantial changes to the Heavy-Duty Vehicle and Off-Road Equipment Demonstration and Pilot Projects.

Project Evaluation and Outcomes

The primary goal of Advanced Technology Demonstration and Pilot Projects is to feed the innovation pipeline to ensure that the technologies needed to meet the state's 2030 goals are commercially available. Over the past several years, the learnings from Advanced Technology Demonstration and Pilot Projects have provided crucial feedback to manufacturers, fleets, and government agencies. Staff continues to work with stakeholders to develop metrics to capture the benefits associated with these projects.

As an additional benefit, these projects will produce emission reductions. Staff estimates that to achieve 7,500 metric tons of CO2 equivalent, 10 tons of NOx, 0.1 tons of PM 2.5, and 0.2 tons of ROG emission reductions as reported in Appendix A. Staff cannot estimate the exact emission benefits for any of the off-road projects being funded from the Greenhouse Gas Reduction Fund until solicitations have been completed and specific project elements have been selected.

CARB will report in Annual Reports and future Funding Plans the outcomes of these projects, including GHG reductions achieved or anticipated using the appropriate CARB quantification methodology; progress in meeting or exceeding SB 535 and AB 1550 targets for investment in and benefits to disadvantaged communities; updates on economic, environmental, and public health co-benefits achieved or anticipated; and project locations.

Metrics for evaluating the success of any heavy-duty vehicle and off-road equipment demonstration and pilot project will include:

- **Successful deployments of vehicles and equipment along with supporting infrastructure.** This metric is evaluated by comparing the project outcome described in the project's application with actual performance.
- **Accurate data collection and reporting of project performance.** This metric is evaluated by an analysis of the quality of the data projects are generating and how that data is being reported to interested stakeholders.
- **Advancing technological development.** This metric is evaluated after the close of a project with an assessment of what level the technology has penetrated into the marketplace to displace conventionally fueled technologies.

The most quantitative way of evaluating success is to compare the project as originally scoped by the application to the actual outcome of the project, as each demonstration and pilot project has unique goals and metrics. However, the ultimate analysis of the success of a demonstration or pilot project can only be evaluated long after it has ended. Success is determined by the extent to which the project has pushed a technology quicker into the marketplace, accelerated the adoption of that technology, and secured those emission

reductions by displacing conventionally fueled technologies in an economical way earlier than would have organically happened.

AB 1550 Disadvantaged Community and Low-Income Household/Community Benefits: Consistent with past Funding Plans staff proposes that up to 100 percent of GGRF funding for Advanced Technology Demonstration and Pilot Projects be in or benefitting a disadvantaged community or low-income and that any application for funding where the state's General Fund dollars are used be given scoring preference to projects that are located in or benefitting a disadvantaged or low-income community.

Clean Truck and Bus Voucher Incentive Project (HVIP)

Proposed General Fund Allocation–$280 million
Proposed Proposition 98 General Funds Allocation–$1.125 billion
Proposed Low Carbon Transportation Allocation–$300 million

Project Overview and Goals

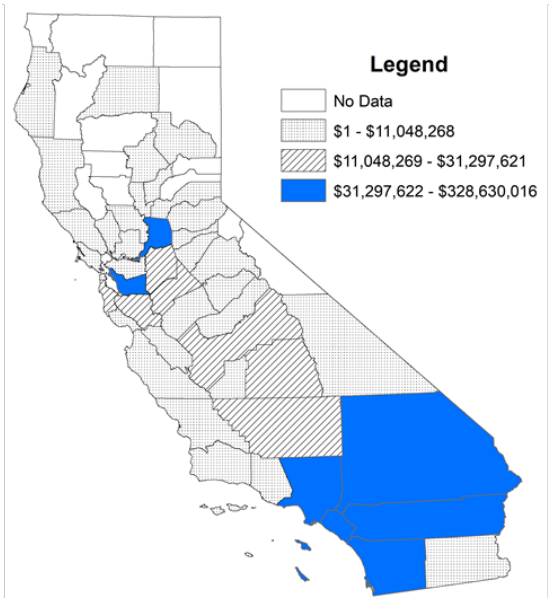
HVIP continues to accelerate market transformation by incentivizing the purchase of zero-emission heavy-duty trucks and buses for California fleets. HVIP is the cornerstone of advanced technology heavy-duty incentives, providing funding since 2010 to support the long-term transition to ZEVs in the heavy-duty market, as well as supporting investments in other emerging technologies to achieve substantial GHG reductions and help meet health-based ambient air quality standards. Investments made through HVIP provide both broad purchase incentives for fleets, and more targeted measures to address air quality needs in California's priority populations. Voucher incentives complement other programs in CARB's heavy-duty funding portfolio by providing a streamlined application process without requiring the scrappage of an existing vehicle.

The zero-emission trucks and buses supported by HVIP vouchers help reduce emissions and noise in priority populations across the state, improving quality of life and health for community members. Since its inception, over 60 percent of awarded HVIP funding has

HVIP At A Glance...

- Over $843 million invested
- 11,000+ clean trucks and buses funded
- 60 percent of funding benefits disadvantaged communities
- 174 million driven in disadvantaged communities by HVIP funded vehicles
- 740 tons of NOx reduced in disadvantaged communities
- 20 tons of PM2.5 reduced in disadvantaged communities

Figure 21: HVIP Voucher Requests



benefited disadvantaged and low-income communities[70] and HVIP funded vehicles have driven more than 174 million miles in disadvantaged communities.

Transitioning to zero-emission trucks also provide direct benefits to truck drivers—a workforce that is predominately comprised of people of color, with 6 percent identifying as Black and 8 percent Asian, and over 55 percent of drivers identifying as Latino.[71] California's trucking fleets are largely made up of small and family run businesses. Trucks funded through HVIP not only reduce driver's exposure to toxic air pollutants, but also help these small businesses realize the total cost of ownership benefits of zero-emission trucks. Changes proposed to HVIP this year will also help to protect drivers by ensuring that fleets receiving state incentive dollars adhere to labor standards and do not misclassify drivers.

HVIP is a unique project in the CARB portfolio that supports on-road advanced technologies with high adoption barriers, providing the bridge between demonstrations and pilots to the scrap and replace programs. The fleet friendly nature of HVIP and ease of use also makes it an ideal incentive program to support fleets with limited resources, and last year CARB approved changes to support more equitable investments and begin to focus HVIP on medium and smaller fleets.

HVIP also plays an important role in preparing the market for regulations by increasing market adoption and decreasing vehicle costs prior to regulatory deadlines such as those for the Innovative Clean Transit and Advanced Clean Trucks regulations. Now is the time to support small fleets in advance of future regulations, so they have an opportunity to act before regulations take effect. We expect that larger fleets will continue to purchase zero-emission trucks due to lower total cost of ownership, available capital resources, and in preparation for upcoming fleet regulations. Other incentives within CARB's portfolio such as the Carl Moyer Memorial Air Quality Standards Program, Community Air Protection Incentive Funds, VW Environmental Mitigation Trust, and Funding Agricultural Replacement Measures for Emission Reductions Program may continue to include options for fleets of all sizes.

HVIP will continue to support the statutory requirements of SB 1204, SB 1403, and AB 2285 by prioritizing funds for early commercial clean heavy-duty vehicles. The proposed HVIP funding policies will ensure that at least 20 percent of Low Carbon Transportation truck funding supports early commercial deployment of zero- and near zero-emission heavy-duty truck and bus technology.

Current Project Status

Since its inception in 2010, HVIP has supported the purchase of over 6,000 zero-emission trucks and buses, 2,500 hybrid trucks, 2,400 natural gas engines, and 290 trucks outfitted with electric power take-off (ePTO) by California fleets through April 2022. After becoming quickly oversubscribed in 2021, HVIP reopened in March 2022 with over $400 million in available funding, the highest amount ever available in a single year. This funding is

[70] California Air Resource Board. *2022 Cap-and-Trade Auction Proceeds Annual Report*. April 2022. https://ww2.arb.ca.gov/sites/default/files/auction-proceeds/cci_annual_report_2022.pdf

[71] Employment Development Department, State of California. "California EEO Detailed Occupations". Accessed June 21, 2022. https://www.labormarketinfo.edd.ca.gov/geography/demoaa.html

anticipated to more than double the current number of zero-emission trucks and buses on the road in California. Within 24 hours of reopening, a total of $272 million was requested, showcasing the high demand for zero-emission technologies. This year small-fleets and small businesses actively participated in HVIP—over 20 percent of the fleets that requested vouchers operate 10 or fewer vehicles, and over 70 percent of vouchers requested were for vehicles domiciled in disadvantaged communities. About a quarter of voucher requests were from fleets with less than $10 million in annual revenue and 38 percent of voucher requests were from fleets with less than $50 million in annual revenue. Additionally, 10 percent of voucher requests were from fleets that stated they were certified as Disadvantaged Business Enterprises.

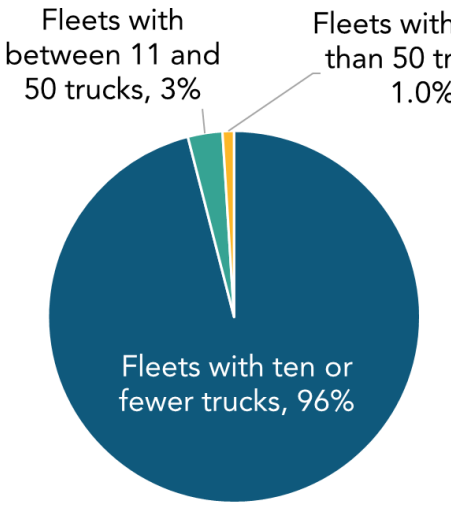
Supporting Small Fleets

In 2022…

- Over 20 percent of fleets that requested HVIP vouchers operate 10 or fewer vehicles
- 63 percent of fleets that requested HVIP vouchers operate 100 or fewer vehicles
- A quarter of voucher requests came from fleets with less than $10 million in annual revenue
- 10 percent of voucher requests were from Disadvantaged Business Enterprises

Data through May 31, 2022

Figure 22: Distribution of California Fleets by Size*



Fleet size includes class 4-8 trucks

**From 2019 DMV Data*

When HVIP reopened it included just over $196 million for standard voucher requests as well as set-asides for public transit agencies, public school buses, drayage trucks and the Innovative Small e-Fleets Pilot. Status updates for the set-asides are described below.

- **Public Transit Bus Set-Aside:** In FY 2021-22, $70 million was set aside for zero-emission public transit buses. As of July 2022, funds for over 120 transit buses have been requested from the set-aside and $49 million remains in the set-aside. The slower pace of voucher requests for public transit buses is likely in part due to public transit agencies' lengthy procurement cycles. Staff will continue to evaluate demand within the public transit set aside, conduct additional outreach to public transit agencies, and investigate if any changes are needed to HVIP to better support public transit agencies. Additionally, staff anticipates providing continued targeted support to transit agencies as Innovative Clean Transit compliance deadlines begin to take

effect, and staff will engage with stakeholders to determine appropriate methods of doing so.

- **Public School Bus Set-Aside for Small and Medium Air Districts:** In FY 2021-22, $130 million was set-aside exclusively for California public school bus fleets located in small and medium sized air districts as defined by the California Air Pollution Control Officers Association. The open application for the Public School Bus Set-Aside for Small and Medium Air Districts (Public School Bus Set-Aside) resulted in 350 school bus replacement applications from 90 school districts across California. The school buses to be replaced with new zero-emission school buses are over 30 years old on average.
- **Drayage Truck Set-Aside:** In FY 2021-22, a $75 million set-aside was established to support the deployment of zero-emission drayage trucks. Within the first 24 hours of HVIP reopening the drayage truck set-aside was fully subscribed, though drayage trucks continued to be funded through standard HVIP voucher requests. As of May 31, 2022 there were 530 requests totaling over $80 million for zero-emission drayage trucks. Of the vouchers requested, 70 percent were for trucks domiciled in disadvantaged communities and over a quarter of requests were from fleets with fifty vehicles or less.
- **Innovative Small e-Fleets Pilot:** The FY 2021-22 Funding Plan established a new pilot within HVIP known as Innovative Small e-Fleets. Innovative Small e-Fleets is designed to support small fleets and individual owner/operators making the transition to zero-emission trucks. Innovative Small e-Fleets will pilot innovative mechanisms such as all-inclusive leases, peer-to-peer truck sharing, truck-as-a-service, assistance with infrastructure, and individual owner planning assistance, as well as other mechanisms. Since the Board's adoption of the funding plan, staff held additional work groups to develop requirements and launched the pilot in summer 2022. Staff anticipates that the lessons learned from Innovative Small e-Fleets will be used to inform changes to HVIP and CARB's broader heavy-duty incentive policies as we continue to target smaller fleets.

Terms and Conditions: HVIP Terms and Conditions are intended to notify potential participants of the requirements of the program prior to submitting an application. Additionally, CARB and the project administrator developed an Implementation Manual to further define these rules and explain roles and responsibilities. The current Terms and Conditions and Implementation Manual for HVIP are available at https://californiahvip.org/im/

These documents are incorporated into the Funding Plan by reference and updated periodically throughout the year to reflect project changes after the Board adopts each funding plan and as other changes are necessary to provide further clarity.

Solicitation: CARB held a competitive solicitation for the selection of a HVIP Grantee in October 2019. In January 2020, CALSTART was selected as the Grantee to administer HVIP for FY 2019-20 via a three-year competitive solicitation with the option of adding the FY 2020-21 and FY 2021-22 funds with an updated grant agreement. As the current grant

comes to a close, staff will conduct a competitive solicitation to select a grantee for the next three years. While the solicitation would encompass up to three FYs, the grant agreement would initially cover one FY with the option to renew for each of the following two FYs. The solicitation would be released in late 2022. Staff anticipate having a new grant in place for the FY 2022-23 funds by the end of the first calendar quarter of 2023.

HVIP Guiding Principles

HVIP guiding principles were approved in the FY 2020-21 Funding Plan and modified in the FY 2021-22 Funding Plan. They are designed to not be strictly interpreted, but rather reflect values that would be factored into decision making. HVIP's guiding principles are as follows:

- Accelerate market transformation for the cleanest advanced technologies.
- Support the goals laid out in CARB's Long-Term Heavy-Duty Investment Strategy.
- Drive purchase decisions.
- Maintain simplicity and a fleet-friendly process.
- Support CARB regulatory programs.
- Avoid market disruptions caused by unpredictable funding availability.
- Graduate established technologies.
- Support more equitable investments.

These guiding principles will be carried forward into each subsequent Funding Plan and modified as needed.

Proposed Funding Allocation

The widespread adoption of ZEVs is essential to achieve the state's climate change goals and to reduce pollution exposure in priority populations. Given this year's appropriation and all of CARB's current funding priorities, staff proposes to allocate $300 million of FY 2022-23 Low Carbon Transportation Investments to HVIP. Staff also proposes to allocate $362 million from the General Fund appropriation to HVIP to support the deployment of zero-emission drayage trucks, transit buses, and school buses as described in the proposed state budget. Following the direction of AB 181, $1.125 billion will be allocated to support local educational agency school bus replacement grants over a 5 year period beginning in FY 2023-24. Staff also proposes to allocate additional funds to the Innovative Small e-Fleets Pilot to continue to explore mechanisms to better support the unique needs of small fleets. By continuing to dedicate this set-aside funding for small fleets, HVIP can position itself to better understand the unique needs of this traditionally underserved group and support their transition to zero-emission in advance of the upcoming Advanced Clean Fleets rule. The proposed breakdown of funding is described in Table 32.

Table 32: Proposed HVIP Funding Set-Asides (millions)

Category	Dollar Amount
HVIP Standard	$265
Zero-Emission Public Transit Buses	$70
Zero-Emission Public School Buses	$135
Local Educational Agency School Bus Replacement Grants*	$1,125
Zero-Emission Drayage Trucks	$157
Innovative Small e-Fleets	$35
Total	**$1,787**

**To be awarded in $225 million dollar increments between FY 2023-24 and FY 2027-28.*

If the funding set-aside for zero-emission public transit buses, zero-emission public school buses, or zero-emission drayage trucks is exhausted, requests for these vehicle types could continue through the HVIP Standard funds. CARB will continue to coordinate with CEC to ensure vehicle purchase incentives are complemented by CEC's infrastructure incentives.

Proposed Changes to Project Criteria

As demand for HVIP has increased dramatically in recent years, staff continues to adapt and consider policy changes to amplify the impacts of funding and support more equitable investments. Staff proposes the policy changes below:

- **Fleet Size Limits:** In November 2021, the Board approved a new fleet size limit for HVIP to support the more equitable investments for medium- and heavy-duty vehicles. These limits were set to take effect in a phased approach to allow manufacturers and fleets time to prepare.
    - Beginning January 1, 2023, private fleets with 100 medium- and heavy-duty vehicles or fewer would be eligible for HVIP.
    - Beginning January 1, 2024, private fleets with 50 medium- and heavy-duty vehicles or fewer would be eligible for HVIP.

  After reviewing additional data on HVIP demand since its reopening on March 30, 2022 considering stakeholder feedback, and legislative direction in AB 179, CARB staff is proposing a suite of changes to the existing fleet size limits. Together, these changes respond to challenges faced by small fleets, support equitable investments, encourage deployments of zero-emission technologies in disadvantaged communities, manage demand within HVIP, and help to expand the market for ZEVs in advance of regulatory deadlines.

The proposed changes are consistent with AB 179 appropriation provisions, which require CARB to administer medium- and heavy-duty vehicle incentive funds in a way that enhances market development and benefits disadvantaged communities and small businesses. The legislation also directs CARB prior to January 1, 2024 to limit the number and award amount levels based on fleet size.[72] Additionally, CARB is directed to establish an amount of incentive funds that will only be available for fleets of less than 100 vehicles, as well as allocate funding to support pilot projects for small fleets and owner-operators. In line with that direction, staff recommends the following modifications to the fleet size limits and suite of policy changes:

- **Delay effective date of fleet size limits to January 1, 2024:** Staff proposes to remove the 100 vehicle fleet size limitation that was to take effect January 1, 2023 (item 1 above), in order to allow larger fleets an additional year to access incentives prior to Advanced Clean Fleets regulatory requirements taking effect. To align with the requirements of Advanced Clean Fleets staff proposes to retain the previously approved limit that beginning January 1, 2024, private fleets with 50 medium- and heavy-duty vehicles or fewer will be eligible for HVIP (item 2 above). Staff is proposing additional changes to the structure of the HVIP incentive to limit the number and award amounts for private fleets with more than 100 vehicles, as described in the following sections.

  As approved in the FY 2021-22 Funding Plan, public entities and California Native American tribal governments will not be subject to the fleet size limit. New-to-market technologies such as FCEVs will not be subject to the fleet size limits until they receive a higher degree of market penetration, meaning fleets of any size can purchase fuel cell vehicles.

  Additionally, staff proposes to exempt non-profit organizations with 501(c)(3) tax exempt status from the fleet-size limits. This will help ensure that the organizations serving California communities continue to have access to zero-emission trucks and buses.

- **Adjust voucher amounts based on fleet size:** Following the legislative direction of AB 179, staff proposes to adjust voucher amounts by fleet size, starting January 1, 2023, as displayed in Table 33.

[72] The fleet size limit requirements in AB 179 will be fulfilled by the changes proposed to HVIP and do not apply to other heavy-duty projects that were appropriated funding through AB 179.

Table 33: Proposed Fleet Size Base Adjustments

Voucher Adjustment Type	Voucher Adjustment Base Amount
Public and Private fleets with 10 or fewer medium- and heavy-duty vehicles	+15%
Public fleets with 11 or more medium and heavy-duty vehicles	0%
Private fleets with between 11 and 100 vehicles medium- and heavy-duty vehicles	0%
Private fleets with between 101 and 500 medium- and heavy-duty vehicles	-20%
Private fleets with more than 500 medium- and heavy-duty vehicles	-50%

Private fleets with more than 500 vehicles would also be subject to additional bulk purchase requirements as described in more detail below.

Public fleets and California Native American tribal government fleets with more than 10 medium- and heavy-duty vehicles and private fleets with between 11 and 100 medium- and heavy-duty vehicles will not be subject to the voucher amount reductions in the table above. Additionally, purchases of zero-emission FCEVs by private fleets with more than 10 medium- and heavy-duty vehicles would not be subject to the voucher amount reductions in the table above until fuel cell technologies achieve greater market penetration.

Voucher base adjustments will be applied first and will compound with other modifiers. For example, a purchase of a Class 8 battery-electric truck ($120,000) by a private fleet with 150 vehicles (-20 percent) that will be used for drayage operations (+25 percent) would receive the adjusted base voucher amount ($96,000) plus the sum of its modifier ($96,000 *25 percent = $24,000), or $120,000. Staff also proposes to recategorize the Plug-in Hybrid and In-Use Converted/Remanufactured voucher modifiers to voucher base adjustments.

This proposed voucher structure responds to feedback from small fleets and owner operators who indicated that voucher amounts were not currently high enough to enable them to purchase a zero-emission truck. As small fleets often have limited available capital, the higher purchase price of ZEVs often play an outsized role in their purchase decisions. The reductions in voucher amounts for larger fleets acknowledge the fact that larger fleets are able to put down the

initial capital and reap the benefits of lower total cost of ownership of zero-emission trucks and the new federal tax credits for medium- and heavy-duty vehicles created in the federal Inflation Reduction Act.

- **Require bulk vehicle purchases for fleets with more than 500 vehicles:** In line with the requirements of AB 179 to enhance market development and benefit disadvantaged communities, staff proposes to only allow private fleets with more than 500 medium- and heavy-duty vehicles to access HVIP funding if they demonstrate that they are purchasing ZEVs in bulk. Large purchases of ZEVs encourage manufacturers to scale up their assembly lines and support economies of scale. Staff proposes that fleets with more than 500 medium- and heavy-duty vehicles must present a purchase order for at least 30 HVIP eligible vehicles, and that the HVIP incentive be applied only for vehicles purchase above 30.

  For example, if a fleet with 600 vehicles purchases 55 ZEVs, they would be eligible to receive 25 HVIP vouchers. The existing fleet voucher request limit of 30 voucher per fleet per year (50 vouchers for drayage trucks) continues to apply, regardless of the size of the bulk order.

  All ZEVs must be deployed in California, and HVIP vouchers for fleets in this size range are discounted to 50 percent of the base voucher amount per Table 33 and must be applied to vehicles deployed in disadvantaged communities. Bulk purchases are not required for zero-emission fuel cell trucks and buses until they achieve greater market penetration.

- **Reserve 70 percent of HVIP standard and drayage set-aside funding for private fleets with 100 vehicles or fewer and all public fleets:** Staff proposes to reserve 70 percent of HVIP standard and drayage set-aside funding for all public fleets and for private fleets with 100 medium and heavy-duty vehicles or fewer. If more than $100 million remains in the reserve on July 1, 2023, staff would release 30 percent of the remaining funding to private fleets with more than 100 vehicles. This reserve fulfills requirements of AB 179 to establish an amount of incentives that are only available to fleets of 100 or fewer. If funding remains in the reserve on November 1, 2023, staff would open all remaining HVIP standard funding and drayage set-aside funding to private fleets with more than 100 vehicles. This phased release of the reserve helps to avoid market disruptions while ensuring that smaller fleets, which are often extremely sensitive to both timing and price considerations, have continuous access to HVIP funds.

- **Flexibility for Small Fleets to Stack Incentives:** Currently, incentives for some technologies in HVIP may be "stacked" or combined with other local and federal incentives to further support fleet purchases decisions. Purchasers are not permitted to stack incentives with other state incentive dollars such as the Carl Moyer Program. To provide more flexibility for small fleets, staff proposes to allow fleets with ten vehicles or fewer to stack HVIP with other state incentive programs, so long as the

other program allows stacking, each incentive program is not paying for the same incremental cost and the non-HVIP incentive program is not required to generate greenhouse gas emission reductions. To promote clarity, staff will publish a list of state funded incentive programs that are eligible small fleet stacking in the next Implementation Manual.

- **Modifications to Manufacturer Rolling Soft Cap:** Staff is proposing two modifications to the existing manufacturer rolling soft cap to improve funding accessibility for small fleets and reduce administrative burden on manufacturers that have consistently delivered vehicles in a timely fashion. The manufacturer rolling soft cap limit was established in 2020 as a way to improve HVIP funding availability and encouraging faster vehicle delivery. Under the manufacturer soft cap, each manufacturer can hold up to 100 unredeemed vouchers at a time across all of the manufacturer's HVIP eligible product line and approved dealers. As a manufacturer redeems vouchers, more vouchers become available for vehicles from that manufacturer. Manufacturers can also be granted additional vouchers by CARB beyond the cap on a case-by-case basis.

  First, staff proposes to exempt voucher requests from small fleets with ten vehicles or fewer from the manufacturer rolling soft cap limit to address concerns that small fleets have been turned away from dealers in part as a result of the manufacturer rolling soft cap. Not counting small-fleet voucher requests towards the manufacturer caps will help ensure that small fleets and owner operators who are interested in making the transition to zero-emission can use HVIP vouchers to purchase the ZEV of their choice assuring support from the dealer. Additionally, this will help HVIP approved dealers feel confident that the time they spend working with small fleet owners will be worthwhile and alleviate concerns that they may not be able to access a voucher for a small fleet because the manufacturer rolling soft cap was exceeded.

  Secondly, staff proposes to exempt manufacturers from the manufacturer rolling soft cap if the manufacturer maintains an average voucher redemption rate of at least 50 vouchers over a 6-month period or 100 vouchers over a 12-month period starting January 1, 2023. The HVIP administrator will track voucher redemption progress of all OEMs and will notify those OEMs meeting these targets that this option is available to them. Manufacturers who have not yet met this redemption threshold may continue to request vouchers until they reach their manufacturer rolling cap or request case-by-case review from CARB to request additional vouchers.

- **Voucher Amount Modifications:** HVIP vouchers are intended to offset a portion of the incremental cost of advanced technologies. Every year, staff re-evaluates voucher amounts to ensure they are set to an appropriate level to impact purchase decisions and takes into account any changes in technology costs. In 2020 the Board approved reductions to voucher amounts for all vehicle classes—on average, voucher amounts were reduced by 20 percent. This year, staff proposes targeted changes to specific vehicle classes as follows:

- **Enhancements for Drayage and Refuse Trucks:** First, staff proposes to extend the 25 percent voucher enhancement for zero-emission drayage trucks. This voucher enhancement first took effect with the launch of Project 800 in 2021, an initiative designed to help jump-start this important segment by supporting the purchase of 800 drayage truck orders in California in 2021. While we have now surpassed that goal, transitioning drayage trucks to zero-emission remains an important priority to support Executive Order N-79-20 and to provide benefits in California's priority populations. Secondly, staff proposes to introduce a similar 25 percent voucher enhancement for zero-emission refuse trucks. As with drayage trucks, this voucher enhancement would be available for a limited period of time, and is intended to support the early deployment of these relatively new to market technologies. Refuse trucks are present in all communities statewide, but their impacts are felt particularly strongly by priority populations located near waste transfer stations who are burdened by multiple pollution sources. Both voucher enhancements would be available until December 31, 2023.

Refuse is Ready for Zero-Emission

- The length and duty-cycle of refuse trucks make them prime for electrification
- There are 12 HVIP eligible refuse truck models from seven manufacturers
- Less noise and no emissions provide direct benefits to communities
- The new 2R Initiative aims to double the number of zero-emission refuse trucks operating in California in 2023

2R INITIATIVE

- **Adjustments for ePTO Systems:** Staff proposes to adjust the voucher structure for ePTOs to better accommodate their use in heavier applications and their use on zero-emission trucks. ePTOs allow for zero-emission operation of ancillary systems, such as cranes or compressors on a vehicle, resulting in significant emission reductions. Staff proposes to add a new funding level for ePTO systems with a storage capacity of greater than 25 kilowatt hours and setting the voucher amount for $50,000 for this new higher energy capacity class. Following public feedback, staff has adjusted the energy capacity from previous proposals to allow more ePTO systems designed for heavier applications or use on a zero-emission truck to be covered under the new category. Currently, voucher amounts are structured so that the highest energy capacity voucher tier is 15 kWh with a voucher amount of $40,000. Staff also proposes to allow ePTO systems to fund up to 65 percent of the total incremental cost—currently HVIP limits ePTOs to covering no more than 50 percent of the incremental cost.

- **Vehicle-to-Grid (V2G) Functionality:** Additionally, as HVIP continues to push for advanced technologies that support California's climate and energy resiliency goals, staff proposes to introduce a new requirement for V2G functionality, or bi-directional charging, on all battery electric school buses purchased with HVIP vouchers. V2G was introduced to the HVIP vehicle catalog as a required feature for BEVs in the first Public School Bus Set-aside allocation. This recommendation is supported by the preliminary responses from applicants and manufacturers to the additional V2G requirement. Applications from eligible applicants met and exceeded demand within three weeks of opening. School bus manufacturers agreed to the V2G requirements for at least one of each type of school bus in the HVIP vehicle catalog. Grid communications, state regulators, and local utility providers continue to develop the new suite of standards making V2G a viable option in the near future. Pilot projects around the world have been demonstrating the applicability, cost savings, and energy benefits of V2G school bus projects, as well. To facilitate this transition, staff recommends that the requirement for V2G functionality on all battery electric school buses begin for new vehicle eligibility applications submitted to CARB on January 1, 2024. As V2G viability improves in other vehicle application types, CARB may consider expanding V2G requirements to additional battery electric vehicle types that return to the terminal daily in the future. At this time staff does not recommend incorporating V2G capability requirements for other battery electric vehicle types, but staff will continue to assess if such requirements may be necessary in the future.
- **Compliance with Labor Standards:** As stated earlier, all fleets requesting HVIP vouchers must be in compliance with applicable labor standards as prescribed by AB 794. As fleets must attest that they are currently in compliance with all state, federal, and local laws or risk ineligibility of funding or having to return funding if non-compliant, there is already an expectation within HVIP that fleets be in compliance with labor standards. However, beginning next year, there will be some changes to how fleets certify that they are in compliance with this requirement and how it is enforced. Specifically, fleets purchasing drayage and short-haul trucks will be required to directly attest to several conditions including that they are in compliance with state labor laws, that they will remain in compliance with labor laws for at least three years or the duration of the incentive agreement, and that they will retain direct control over the manner and means for performance of any individual using or driving the vehicle. Fleets who receive an incentive will be required to attest that they are in compliance annually throughout the term of the HVIP ownership requirement. Additionally, CARB will publish a list of all drayage and short haul trucking fleets that receive HVIP incentives and will collaborate with the appropriate labor law agencies in following up on substantiated complaints that a fleet which received HVIP incentives is not in compliance with state labor standards.
- **Flexibilities for Public Transit Agencies:** Public transit agencies play a unique role in the state's air protection and climate goals. Zero-emission transit buses have served as a beachhead, helping spur the initial market for zero-emission vehicles and their components. Additionally, public transit agencies play a critical role in reducing vehicle miles traveled, and serving their communities. To date, public transit agencies have

demonstrated a commitment to exceeding requirements laid out in the Innovative Clean Transit regulation. Through a public work group process, staff will explore additional flexibilities for the Public Transit Bus Set-Aside to ensure that public transit agencies will be supported in the most efficient way possible as regulatory requirements begin to take effect.

- **Public School Bus Set-Aside:** The FY 2022-23 budget continues the three-year budget allocation of $400 million to CARB for school bus incentives to deploy 1,000 zero-emission school buses in underserved rural school districts that directly benefit priority populations and improve air quality in low-income and DACs. This will be the second installment of $135 million for school buses. CARB's recent school bus funding programs defined "rural" as school bus fleets in small- and medium-sized air districts, that typically do not have as much access to funding as those in larger air districts. Staff proposes to apply additional methods for identifying an "underserved" school district in the second allocation, in order to continue to replace the oldest school buses in historically underserved school districts across the state. In addition to air district size and school district location within a disadvantaged community or low-income community, as defined by CalEnviroScreen 4.0, staff may also consider other school bus or school district demographic data. By including additional or alternative eligibility and prioritization criteria, the Public School Bus Set-Aside will be better positioned to provide equitable opportunities for new, cleaner school buses to be deployed across the state.

  Secondly, staff proposes to adjust voucher amounts to ensure funds are distributed equitably and in a fiscally responsible manner. Staff will analyze recent purchase order data collected from various grant programs and compare incentive amounts to similar programs nationwide. Maximum voucher amounts will be assessed for each school bus type and may result in a lower maximum for one or more school bus types. Analysis will include school bus specifications such as chair lifts. Staff may also consider utilizing the statewide contract developed for the deployment of the Proposition 98 funds, as described next, to set voucher amounts. Prior to making any adjustments to voucher amounts, staff will discuss any changes to voucher amounts through a public work group process.

- **Local Educational Agency School Bus Replacement Grants:** AB 181 provided CARB with $1.125 billion from Proposition 98 General Funds to support grants to local educational agencies to replace internal combustion school buses with new zero-emission school buses over five FYs beginning in FY 2023-24. An additional $375 million was provided to CEC to provide complementary grants for charging/fueling infrastructure.

  To be eligible to receive funding, local educational agencies must commit to scrap an existing internal combustion school bus within two years of the delivery of the new bus. Grants that support the purchase of zero-emission school buses will be prioritized. However, if a local educational agency demonstrates that they face significant barriers to the adoption of zero-emission technology and that alternate approaches are not feasible, funding may be used to support school buses powered

by renewable fuel. Priority will also be given to applicants that serve a high percentage of pupils eligible for free or reduced-price meals, foster youth and English learners; small and rural school districts; applicants that operate the oldest internal combustion buses; and applicants that purchase zero-emission battery-electric school buses with bi-directional charging.

Throughout FY 2022-23, CARB staff will work with stakeholders and CEC, the Department of General Services, and CWDB to develop guidelines and prepare to open the first round of grants. To minimize application barriers, CARB and CEC will coordinate to offer a single application to cover vehicle purchases, infrastructure investments, and other associated funding requests such as workforce development and training. In order to secure competitive pricing and support the development of high-quality jobs, the Department of General Services in consultation with the CEC and CWDB will establish statewide contracts with manufacturers of zero-emission or low-emission school buses that satisfy high road standards outlined in the Unemployment Insurance Code. Pursuant to AB 181, staff expect to award the first round of grants in FY 2023-24, with an initial funding window of $225 million. Following the first set of awards, $225 million will be awarded annually through FY 2027-28.

- **Future efforts:** Staff will continue to evaluate opportunities to support more equitable investments, improve the efficacy of investments, and support future CARB regulations. While staff is not proposing any changes to increase the vehicle ownership requirement length for the coming year, staff will continue to evaluate whether extensions to the ownership and warranty requirements would align with program goals to maximize emission reductions in California and support small fleets.

Effective Date: Upon approval, proposed changes to HVIP will become effective the day after the Board meeting, unless a different effective date is explicitly identified for the individual policy change.

Project Evaluation and Outcomes

While certain metrics, like cost-effectiveness, are commonly used to evaluate the effectiveness of programs, near-term emissions reductions are not the primary goal of HVIP. Rather, the primary long-term goals of HVIP are promoting technology evolution, supporting equitable investments, and ensuring that advanced technology will be commercially available to meet California's large scale. Staff continues to work with stakeholders to develop metrics that can be used to quantify HVIP's progress towards these goals.

As an important additional benefit, HVIP will secure emissions reductions. Staff expects to fund about 7,350 zero-emission and near-zero-emission vouchers, providing an estimated 425,000 metric tons of CO2 equivalent GHG emission reductions. Staff also estimates about 1,500 tons of NOx, 30 tons of PM 2.5, and 17 tons of ROG emissions will be reduced as the advanced technology vehicles replace conventional diesel trucks and buses. Appendix A provides additional details on the emission estimates.

Staff use a number of methods to determine if HVIP is achieving program goals, including evaluating emission reductions, percent of vouchers requested in disadvantaged communities and by small fleets, and other strategies described in the Long-Term Heavy-Duty Investment Strategy. Building upon these existing evaluation methods, last year, HVIP staff developed a new Fleet Survey that focuses on various user experiences including factors that influenced the purchase decision. This survey was administered to all purchasers who had redeemed an HVIP voucher within the last three years. The response rate was relatively low with only 13 percent of the survey population completing the survey in full. Of those who responded, 65 percent indicated that they would not have purchased/leased their vehicle without the HVIP voucher while 10 percent were unsure. Survey respondents also indicated that the HVIP voucher had a strong impact on purchasers' decision of what vehicle to buy. When asked to rate the importance of the voucher, respondents gave an average rating of 4.4 on a 1 (less important) to 5 (most important) scale. In future years, staff will continue to review survey results and refine survey methodology and questions to improve response rates and collect additional information as necessary to inform policy changes. Staff will also continue to evaluate additional metrics and data sets that can be utilized such as collecting vehicle use data through telematics, interviews with fleet managers, and direct interaction with vehicle operators. These data streams allow for participants to help shape future policy through their direct and indirect feedback.

AB 1550 Disadvantaged Community and Low-Income Household/Community Benefits: HVIP will continue to be implemented primarily on a first-come, first-served, statewide basis in the upcoming year, so it is not possible to estimate in advance exactly how much funding will be spent in disadvantaged and low-income communities. However, the overall program changes described above continue to focus public funds in ways that benefit these communities. To date, approximately 60 percent of HVIP funding has benefitted priority populations.

Currently, a higher HVIP incentive is offered for ZEVs domiciled and operating in disadvantaged communities. As part of the Cap-and-Trade auction proceeds reporting requirements, CARB will track where HVIP funds are spent, so it can calculate and report AB 1550 investment criteria.

Clean Off-Road Equipment Voucher Incentive Project (CORE)

Proposed Low Carbon Transportation Allocation–$273 million

Project Goals

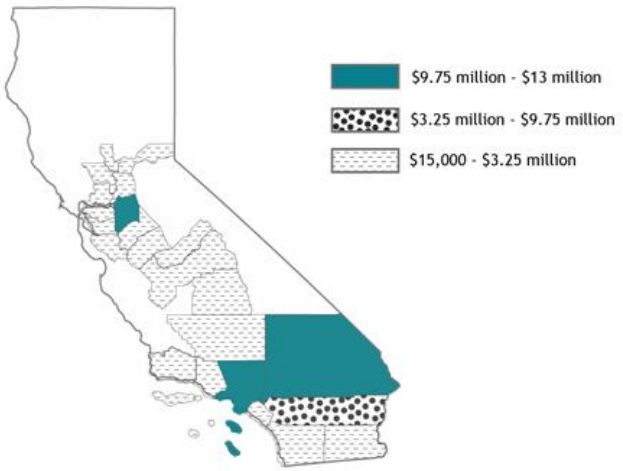
The CORE project is intended to accelerate the deployment of advanced technology in the off-road sector by providing a streamlined way for fleets to access funding that helps offset a portion of the incremental cost of such technology. CORE targets commercial-ready products that have not yet achieved a significant market foothold. By promoting the purchase of clean technology over internal combustion options, the project is expected to reduce emissions, particularly in areas that are most impacted; help build confidence in zero-emission technology; support CARB strategies and subsequent regulatory efforts where possible; and provide other sector-wide benefits, such as technology transferability, reductions in advanced-technology component costs, and larger infrastructure investments. A CORE voucher also provides additional funding and prioritizes investments of equipment deployed or domiciled in disadvantaged or low-income communities and small businesses investing in zero-emission equipment. A CORE voucher also provides additional funding and prioritizes investments of equipment deployed or domiciled in disadvantaged or low-income communities and small businesses investing in zero-emission equipment. Furthermore,

CORE At A Glance…

- $61.8 million Invested through May 1, 2022
- 465+ pieces of clean equipment funded
- 75 percent of funding benefiting disadvantaged communities
- 29.8 tons of NOx reduced in disadvantaged communities
- 0.51 tons of PM2.5 reduced in disadvantaged communities

Data through May 1, 2022

Figure 23: CORE Voucher Requests



CORE allows stacking or co-funding with other public funding programs. CORE – Professional Landscape Service Equipment (CORE- pro landscaping)[73] is a good example where a local air district program can fully fund zero-emission equipment used by small businesses or sole proprietors providing professional landscaping services in California. Additionally, funding for zero-emission landscaping equipment is available through the Carl Moyer program.[74]

Current Project Status

CORE received an initial allocation from FY 2017-18 funds and was subsequently allocated additional funding in FY 2018-19. In February 2020, CORE launched as a first-come, first-served voucher program for zero-emission off-road freight equipment and was met with substantial demand. Given that CORE was oversubscribed by greater than 100 percent, the program was closed to new vouchers for 18 months. Recognizing CORE's successful launch and the continued need for funding in the off-road sector, CORE was allocated $194.95 million in FY 2021-22, $30 million of which was used to fund waitlist vouchers to minimize any further market disruptions and aid in market recovery. The FY 2021-22 funds allowed CORE to expand eligible equipment beyond just freight enabling equipment, and offer funding for construction, agriculture, switcher locomotives, and commercial harbor craft equipment and vessels. CORE opened successfully on July 18, 2022, 3 of the 9 categories quickly filled. The program voucher application process was open to allow small businesses located in DACs to apply. Since inception, over 500 vouchers have been issued, totaling approximately $70 million. Approximately 75 percent of CORE funded equipment has been deployed in low-income and disadvantaged communities ($58 million).

A total of 28 manufacturers currently offer eligible equipment models, including terminal tractors, forklifts, transport refrigeration units, mobile power units, forklifts, and railcar movers, and switcher locomotives. Altogether, there are 221 different eligible equipment model configurations.

Staff are also continuing to develop requirements and prepare for launch of the CORE – Professional Landscapers funding. This category of funding will include $30 million in funding for small off-road equipment such as leaf blowers, and lawnmowers, following the directives of SB 170 (Skinner, Chapter 240, Statutes of 2021). Staff has held four public work group meetings to discuss program requirements, and expects to open the program late this year.

Terms and Conditions: CORE Terms and Conditions are intended to notify potential participants of the requirements of the program prior to submitting an application. Additionally, CARB and the project administrator developed an Implementation Manual to further define these rules and explain roles and responsibilities. The current Terms and Conditions and Implementation Manual for CORE are available at https://californiacore.org/.

[73] California CORE Professional Landscaping program: https://californiacore.org/equipment-category/landscaping-gardening/ Accessed September 15, 2022.
[74] Carl Moyer Program – State Reserve Solicitation: https://ww2.arb.ca.gov/carl-moyer-program-state-reserve-solicitation. Accessed September 15, 2022.

These documents are incorporated into the Funding Plan by reference and updated periodically throughout the year to reflect project changes after the Board adopts each funding plan and as other changes are necessary to provide further clarity.

Solicitation: CARB held a competitive solicitation for the selection of a CORE Grantee. In February 2019, CALSTART was selected as the Grantee to administer CORE via a three-year competitive solicitation with the option of adding the FY 2020-21 and FY 2021-22 funds with an updated grant agreement. As the current grant comes to a close, staff will conduct a competitive solicitation to select a grantee for the next three years. While the solicitation would encompass up to three FYs, the grant agreement would initially cover one FY with the option to renew for each of the following two FYs. The solicitation would be released in late 2022. Staff anticipate having a new grant in place for the FY 2022-23 funds by the end of the first calendar quarter of 2023.

CORE Guiding Principles

CORE guiding principles were approved in the FY 2021-22 Funding Plan and reflect foundational values that would be factored in decision-making. The CORE guiding principles were based off the original guiding principles for AQIP that were described in the FY 2009-10 Funding Plan and the HVIP guiding principles which were first outlined in the FY 2020-21 Funding Plan. The CORE guiding principles are provided below with no value in order:

- Accelerate market transformation for the cleanest advanced technologies.
- Support the goals laid out in CARB's Long-Term Heavy-Duty Investment Strategy.
- Drive purchase decisions.
- Maintain simplicity and a fleet-friendly process.
- Support CARB strategies and regulatory efforts.
- Avoid market disruptions caused by unpredictable funding availability.
- Graduate established technologies.
- Support more equitable investments.

Proposed Funding Allocation

There has been substantial interest and demand for CORE funding, and staff expects continued growth within the program. Given this year's appropriation and all of CARB's current funding priorities, staff proposes to allocate $273 million of FY 2022-23 funding to the CORE program, furthering the shift to zero-emission technology in diverse set of markets, industries, and applications using off-road equipment. This year, staff will continue to build on the following key efforts launched in previous FYs or raised by stakeholders to ensure the program operates effectively at its proposed funding level. Staff will continue to engage with stakeholders through a public work group process to make the following changes to the program:

- **Equity and Small Business Considerations:** Currently, CORE provides additional funding for small businesses (who typically do not purchase "new" equipment) and some time to apply, signaling to equipment dealers to focus on small businesses sales. Specifically, small businesses located in DACs had an on-ramp to the top of the first-come, first-served list for the first five business days after the heavy-duty CORE equipment launched and again if the contingency list is funded. This was very useful in high participation equipment categories like yard trucks which was oversubscribed in a few short minutes and several small businesses applied in the first week of the program. CORE has also conducted four public workshops (with Spanish language interpretation) over the summer in advance of the fall 2022 opening of its professional landscaping funding program.

  CORE – pro landscaping will begin to collect demographic data as part of the voucher application process. As small business professional landscapers do not typically belong to trade associations, their primary interaction with CARB may be the voucher application and the CORE eligible dealer. This effort will inform the accessibility and better understand who actually operates the CORE funded zero-emission equipment.

  Staff will continue to evaluate methods to build awareness and make funds more accessible to small businesses while continuing to prioritize the deployment of CORE-funded equipment in low-income, disadvantaged, underserved and rural communities. In addition, staff will coordinate closely with other clean transportation investment projects and evaluate potential ways to incorporate elements, such as workforce training, career development, and job pathways/creation requirements in CORE to boost the socioeconomic impact of the program and meet CARB's equity goals.

- **Funding Categories:** In order to promote broad zero-emission equipment market maturity, the current program offers 10 different funding categories where a funding cap is imposed for the first six months after the program launch. To date, these are grouped by equipment types in the primary industry of use. As off-road zero-emission equipment grows in market acceptance, staff will continue to evaluate other grouping approaches and a maximum voucher amount to improve program implementation and voucher process.

- **New Program Eligibility Metrics:** Staff will continue to evaluate the current equipment categories; remove equipment categories which do not subscribe to the program; and to continue to work with stakeholders to provide a wide variety of zero-emission off-road equipment offerings prior to regulatory requirements. Staff will evaluate the implementation of off-ramps for categories of equipment that, by regulation, will soon be required to be manufactured or purchased. Staff will hold additional public meetings in late 2022/early 2023 to discuss the upcoming solicitation, program relaunch, implementation manual updates, and seek stakeholder feedback on equipment types with a general horsepower equivalent that may be more appropriate than the current category grouping by primary industry for eligibility.

- **Zero-Emission Equipment Refueling Support**: Staff will continue to evaluate options for off-road fleets to power and refuel voucher-funded zero-emission equipment in the field. Considerations include refueling option(s) specific to equipment, operational needs, and site conditions. Staff will continue to gather information relative to off-road applications, and equipment types, and power constraints to distinguish between the current Mobile Power Unit, as a standalone eligible equipment, or as an infrastructure enhancement. This would impact funding levels and eligibility of advanced refueling technologies (mobile, portable, and temporary.

Proposed Changes to Project Criteria

Staff will continue to adjust voucher levels in a way that moves the needle to advance technology, ensures equipment diversity, and maximizes the impact of available funding. Furthermore, as zero-emission technology matures with more off-road zero-emission makes and models commercially available for use in the off-road sector, equipment types may warrant a fixed incentive amount by equipment type. The need for additional telematic data will also be taken into consideration. Due to higher incremental costs and earlier stage of market development, staff is proposing to increase the maximum voucher from $500,000 to $1,000,000 for cargo handling equipment, commercial harbor craft, and locomotives.

Project Evaluation and Outcomes

The FY 2022-23 funding is expected to further drive wide-scale adoption of commercially available clean off-road equipment and development of zero-emission infrastructure, which in turn will drive down costs and strengthen the supply chain to support a broader zero-emission market. This project supports building on successful beachhead technology applications, and staff anticipates expansion to additional off-road applications as the technology matures.

Staff estimates, once all equipment funded by the proposed $273 million allocation is deployed, about 305,000 tons of CO2 equivalent will be potentially avoided per year. In addition, the allocation would also potentially provide 190 tons in avoided NOx emissions, 8tons in avoided PM 2.5 emissions, and 9 tons in avoided ROG emissions annually. Appendix A provides additional details on the emission estimates and assumptions used when performing calculations.

Staff will include a more comprehensive assessment of project effectiveness moving forward, including appropriate metrics and data collection methodologies. An example is assessing the acceptance of zero-emission off-road equipment using metrics such as feedback on usage purpose and satisfaction; usage data, such as hours of use of new equipment; and factors that influence the purchase decision. These metrics can be assessed through participant surveys. The assessment will also evaluate how effective the project is at achieving other expected outcomes, such as improving zero-emission technology acceptance, reducing advanced technology component costs, and increasing private investment. This will build upon existing data collection elements already in CORE, such as end user surveys. The assessment will likely involve the participation of a person or persons with direct applicable experience and expertise in these types of assessments.

AB 1550 Disadvantaged Community and Low-Income Household/Community Benefits: This proposed funding would be available statewide and implemented on a first-come, first-served basis, so it is not possible to estimate in advance exactly how much funding will benefit priority populations. However, CORE, as currently structured, promotes the deployment of equipment in disadvantaged and low-income communities through higher voucher amounts. Staff will continue to evaluate and implement, if appropriate, program changes that will help maximize priority population benefits while still effectively accelerating the market transformation of the cleanest advanced technologies. During these first five business days, if voucher requests received are greater than the funding cap for any given equipment category (i.e., terminal tractors within the first five business days of accepting new requests), prioritization to small businesses in a DAC will be implemented. A voucher request may be prioritized to receive funding to ensure that small businesses and purchasers deploying zero-emission equipment in disadvantage/low-income communities have an opportunity and access to funding via the CORE program.

As stated earlier, over 500 CORE vouchers have been issued since inception, totaling over $70 million. Approximately 75 percent of CORE-funded equipment has been or will be deployed in low-income and disadvantaged communities ($58 million). CARB staff will continue to track funds, as part of the Cap-and-Trade auction proceeds reporting requirements, so staff can continue to calculate and report the proportion of funding that meets the AB 1550 investment criteria.

Truck Loan Assistance Program

Proposed AQIP Allocation–$28.64 million

Project Overview and Goals

Launched in 2009, the Truck Loan Assistance Program utilizes AQIP funds to help small-business fleet owners, affected by CARB's In-Use Truck and Bus Regulation, to secure financing for upgrading their fleets with newer trucks. The program is implemented in partnership with the CPCFA through its California Capital Access Program and leverages public funding with private funding from participating lending institutions. The program is available for small fleets with 10 or fewer trucks at the time of application. It creates financing opportunities for truck owners, who fall below conventional lending criteria and are unable to qualify for traditional financing at reasonable rates, giving them an opportunity to improve their credit rating and build their business. Lenders use their traditional underwriting standards to establish loan terms; however, the program currently includes an interest rate cap of 20 percent. Because the program primarily reduces criteria and toxic air contaminant emissions, AQIP is the only source of CARB funding available for this program.

Truck Loan Assistance Program At A Glance…

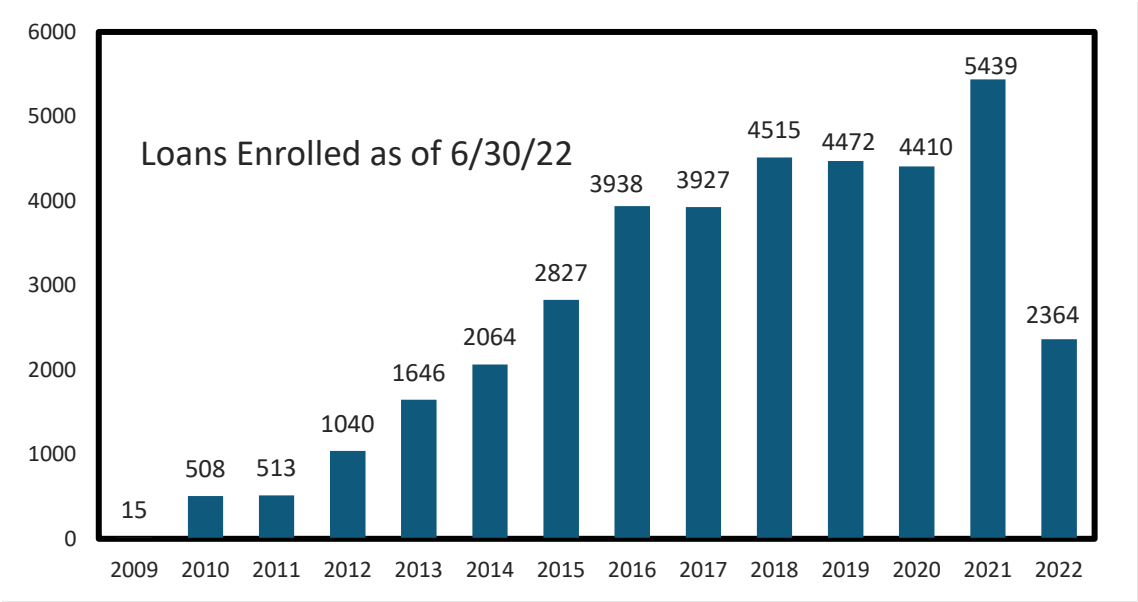
- Nearly $214 million invested
- State investment leverage about $2.6 billion in private financing
- 40,400+ clean vehicles and equipment financed
- Nearly half of funding benefits disadvantaged communities

Data through June 30, 2022

Current Project Status

As of June 30, 2022, about $214 million in Truck Loan Assistance Program funding had been expended to provide about $2.6 billion in financing to small-business truckers for the purchase of over 40,400 cleaner trucks, exhaust retrofits, and trailers. Loan enrollments had been increasing over most years of the program and have remained mostly steady since 2018 except for an increase in calendar year 2021 as shown in Figure 24, which shows activity through June 30, 2022.

Figure 24: Loan Activity by Calendar Year



CARB allocated $28.64 million to the Truck Loan Assistance Program for FY 2021-22. No funding was allocated in FY 2020-21 but the previous AQIP funding allocation for FY 2019-20 of $48 million was much higher than any other recent allocation.

CARB contribution rates for lender loan loss reserve accounts were increased in March 2020. CARB contribution rate for lenders with loan loss reserve accounts of $500,000 or more was increased to 10 percent of the enrolled loan balance. For lenders with loan loss reserve accounts less than $500,000 the contribution rate remained at 14 percent. The previous contribution rate structure had three tiers of four, seven, and 14 percent at loan loss reserve amounts of over $1.5 million, $500,000 to $1.5 million and under $500,000 respectively. The increase in the contribution rates and increased truck costs have significantly increased the consumption of CARB funding from an average of about $3,000 per loan in first quarter of 2020 to over $9,000 per loan in 2022.

Incremental recapture procedures have been implemented since 2017. This mechanism redirects older contributions back to the Truck Loan Assistance Program to support future enrollments and makes the program more self-sustaining by reinvesting funds from matured loans. A total of nearly $13 million in recaptured funds have been redeposited into the program account.

CARB's May 20, 2022 Memorandum to the Board Members, summarized CARB's thorough and sustained outreach efforts to alert vehicle owners they may be affected by the Truck and Bus Regulation and provide them financial assistance opportunities[75]. Outreach efforts have included sending out targeted mail-outs to over 200,000 fleet owners providing a 2-year notice of upcoming deadlines each year and following up with a one-year reminder. Since 2018 a total of 109,877 letters and 169,832 postcards have been mailed to individuals

[75] Segall, Craig. Truck and Bus Regulation Final Compliance Deadline. California Air Resources Board. May 20, 2022. https://ww2.arb.ca.gov/sites/default/files/2022-06/tbcompliancedeadline_ADA.pdf

identified as owning vehicles facing upcoming compliance deadlines. These outreach efforts frequently mention the Truck Loan Assistance Program as an option to help purchase compliant newer vehicles.

Proposed Funding Allocation

CARB staff is considering a funding allocation of $28.64 million for the FY 2022-23 funding cycle. Program need is expected to continue through 2023. Factors such as DMV compliance verification, which will only allow clean trucks in compliance with CARB's In-Use Truck and Bus Regulation to be registered by the DMV, the equipment replacement deadline in the regulation, and recovery from the global health and economic crisis are expected to continue demand for the program. Based on recent program demand, funding allocated in previous FYs could be exhausted before the end of FY 2022-23. To ensure the continuity of the program through the full implementation of the In-Use Truck and Bus Regulation additional funds will be needed.

For many small fleets, this loan program may offer the only viable option to achieve compliance. CARB remains committed to meeting demand, as having loan assistance unavailable for even a short period erodes the confidence lenders have in providing the necessary financing to purchase trucks to meet the compliance requirements of the In-Use Truck and Bus Regulation.

Proposed Changes to Project Criteria

As 2023 approaches, the model year schedule in the regulation will come to an end and 2010 or newer engines will be required except for some exemptions. CARB expects that fleets will continue to turnover vehicles throughout 2023 to meet the final regulation deadlines and DMV registration requirements.

California's clean air quality, carbon neutrality, petroleum reduction, and climate change goals are accelerating the introduction and deployment of zero-emission technologies. With 100 percent of sales of new passenger vehicles and trucks in the state required to be zero-emission by 2035, all drayage trucks required to be zero-emission by 2035, off-road vehicles and equipment required to be zero-emission by 2035 where feasible, and all other vehicles in the medium- and heavy-duty fleet required to transition to zero-emission by 2045 as described in Executive Order N-79-20, California is quickly moving toward ZEVs. With these policies in place, the loan program must evolve to meet the needs of small business truckers seeking ZEV financing.

CARB staff is working with CPCFA and participating lenders to support zero-emission heavy-duty truck financing for small fleets. This includes exploring possible modifications to the existing program, and incorporating learnings from the new Innovative Small e-Fleets set-aside in HVIP, where possible. The Zero-Emission Truck Loan Pilot Project will also help small fleets explore transitioning to ZEVs as all CARB loan support evolves to ZEV financing for small fleets.

While it is clear CARB is transitioning support to ZEVs, some stakeholders voiced concern that CARB should continue to support heavy-duty diesel trucks in the Truck Loan Assistance

Program this year. CARB staff and CPCFA will explore ways to focus the loan program on assisting fleets utilizing the program to get into compliance with the In-Use Truck and Bus Regulation. Further, CARB staff intends to notify prospective borrowers of upcoming zero-emission regulations, so they are aware of the upcoming changes when purchasing a vehicle.

As stated earlier and in line with the requirements of AB 794, all the funding for the loan program utilized by drayage and short haul trucking fleets must be in compliance with labor standards. CARB staff will work with CPCFA to structure the loan program so that prospective borrowers provide documentation attesting that they are and will continue to be in compliance with labor laws for the duration of their loans. Before loans are enrolled in the program, participating lenders will also certify that borrowers are not on the list maintained by the Division of Labor Standards Enforcement under Section 2810.4 of the Labor Code. CARB will follow-up on any allegations received by third-parties that claim that a borrower is not in compliance with state Labor Standards.

Project Evaluation and Outcomes

The proposed FY 2022-23 allocation for the Truck Loan Assistance Program is expected to enable financing for about 3,000 new truck purchases. This will help small business truckers comply with the In-Use Truck and Bus Regulation and result in an estimated 450 tons of NOx and 16 tons of ROG emission reductions. Appendix A provides additional details on the emission estimates.

Staff use a number of methods to evaluate whether the Truck Loan Assistance Program is achieving its goals. CARB has directed CPCFA to perform three of more annual audits of participating lenders' loan program portfolios. The audits provide insight for how each participating lender conducts their business and whether they are adhering to CARB and CPCFA regulations. CPCFA also provides monthly reports to CARB on all loans enrolled in the program. The audit reports and loan data from CPCFA provide documentation to help CARB monitor the program.

The program benefits small business fleet operators that are unable to qualify for traditional financing at reasonable rates. Though the program has an interest rate limit of 20 percent data provided by CPCFA shows the average interest rate of the loans in the program is 13 percent. About 96 percent of enrolled loans have been issued to fleet owners with 10 or fewer employees and about 45 percent of enrolled loans have been issued to owner operators with one truck. The loan program has successfully leveraged public funds into private financing, having leveraged $214 million in contributions into $2.6 billion in private financing.

Almost half of the Truck Loan Assistance Program funding has been spent within and benefiting individuals living in low-income and disadvantaged communities. The program has broad statewide appeal including in rural regions. CARB staff will be monitoring zero-emission trucks enrolled in the program, especially in disadvantaged and low-income communities. CARB will utilize AQIP funds for the loan program to support equipment purchases by small business fleets meeting the Truck and Bus regulation deadline and DMV compliance verification.

AB 1550 Disadvantaged Community and Low-Income Household/Community Benefits:
The AB 1550 disadvantaged community, low-income community, and low-income household investment targets apply only to projects funded with Cap-and-Trade auction proceeds. They are not a requirement of AQIP funding, the sole funding source for the Truck Loan Assistance Program. Almost half of the Truck Loan Assistance Program funding has been spent within and benefiting individuals living in low-income and disadvantaged communities.

Zero-Emission Truck Loan Pilot

Proposed Low Carbon Transportation Allocation–$5 million

Project Overview and Goals

The Zero-Emission Truck Loan Pilot Project is a new project that is designed to combine financing for both heavy-duty ZEVs and charging or fueling infrastructure. A comprehensive loan package that combines vehicle and infrastructure financing will provide additional access to zero-emission financing and create a streamlined lending process for small businesses that are transitioning to ZEVs. CARB will partner with CEC to build on the existing successful relationship in implementing the Truck Loan Assistance Program through their California Capital Access Program. The pilot will allow CARB, CPCFA, CEC, and lenders to learn from borrowers of small business fleets what is needed to make a successful transition to zero-emission and what additional areas of support are required.

SB 372 was approved by the Governor in fall 2021. The bill directs CARB to develop and administer the Medium- and Heavy-Duty Zero-Emission Vehicle Fleet Purchasing Assistance Program with the CPCFA, to make financing tools and non-financial supports available to the operators of medium- and heavy-duty vehicle fleets to fully enable the transition of their fleets to ZEVs. A combination of financial and non-financial tools is needed to support the many different sizes and sectors of fleets that need to transition to zero-emission. The Zero-Emission Truck Loan Pilot Project fits within the larger goals of this bill.

Current Project Status

The Zero-Emission Truck Loan Pilot Project is currently under development and staff is considering stakeholder feedback to develop the pilot. Staff anticipates having a pilot in place by mid-year 2023. Staff will work with stakeholders on implementation of the pilot throughout the remainder of 2022 and in early 2023.

Proposed Funding Allocation

Staff is proposing $5 million for the new Zero-Emission Truck Loan Pilot Project for the FY 2022-2023 funding cycle. A $5 million loan pilot would fund approximately 65 zero-emission trucks, assuming $350,000 average cost per zero-emission truck and a 20 percent contribution rate. If project demand warrants, additional funding may be allocated. In addition, CEC intends to offer co-funding for this joint project.

As stated earlier and in line with the requirements of AB 794, all the funding for the new Zero-Emission Truck Loan Pilot Project utilized by drayage and short haul trucking fleets must be in compliance with labor standards. CARB staff will work with CPCFA and CEC to structure the pilot so that prospective borrowers provide documentation attesting that they are and will continue to be in compliance with labor laws for the duration of their loans. Before loans are enrolled in the pilot, participating lenders will also certify that borrowers are not on the list maintained by the Division of Labor Standards Enforcement under Section

2810.4 of the Labor Code. CARB will follow-up on any allegations received by third-parties that claim that a borrower is not in compliance with state Labor Standards.

Project Evaluation and Outcomes

Staff will use a number of methods to evaluate the Zero-Emission Truck Loan Pilot. Staff will collect data on all the loans enrolled in the pilot from CPCFA including all information provided by prospective borrowers submitted on loan applications, vehicle information and supporting infrastructure. CARB will work closely with the participating lender(s) through CPCFA to monitor the program.

The Zero-Emission Truck Loan Pilot Project will help program staff learn what small business fleets need to transition to zero-emission by evaluating the success of deployments, analyzing project data, and adjusting where necessary if actual outcomes do not meet the original pilot scope. Staff will work with stakeholders and internally to develop parameters and key data needed to evaluate pilot deployments. In addition, staff will also monitor pilot participation in disadvantaged communities and low-income communities and solicit input from lenders and borrowers to understand how the program has influenced purchasing behaviors.

AB 1550 Disadvantaged Community and Low-Income Household/Community Benefits: This proposed funding would be available statewide and implemented on a first-come, first-served basis, so it is not possible to estimate in advance exactly how much funding will benefit priority populations. However, staff will evaluate and implement, if appropriate, program changes that will help maximize priority population benefits while still effectively accelerating the market transformation of the cleanest advanced technologies. CARB staff will track funds, as part of the Cap-and-Trade auction proceeds reporting requirements, so staff can calculate and report the proportion of funding that meets the AB 1550 investment criteria.

Chapter 5: Addressing California Climate Investment Guideline Requirements Related to Priority Populations

CARB's CCI Guidelines provide direction for implementing agencies. The CCI Guidelines include requirements and recommendations regarding providing benefits for priority populations, which means disadvantaged communities, low-income communities, and low-income households as defined by state law. This chapter outlines the steps CARB is taking to meet the CCI Guidelines requirements regarding priority population investments. The requirements related to evaluating investments for priority populations and maximizing benefits for disadvantaged communities can be found in Section V of the CCI Guidelines and are summarized below, along with the actions CARB is taking to address them.

While these requirements formally only apply to programs and projects funded with Cap-and-Trade auction proceeds, CARB is committed to maximizing priority population benefits for all of the investments in this Funding Plan regardless of the funding source. As such, projects funded with appropriations from the General Fund are discussed in this chapter as well those funded from GGRF.

CCI Guideline Requirement: Assess program structure for opportunities to target investments to benefit priority populations and evaluate projects for potential benefits to priority populations, using the criteria available at: https://ww2.arb.ca.gov/resources/documents/cci-quantification-benefits-and-reporting-materials?corr.

> **CARB Action:** Staff expects that every project funded in the FY 2022-23 Funding Plan will provide benefits for AB 1550 priority populations. The project category descriptions included in Chapters 3 and 4 of this Funding Plan describe the anticipated AB 1550 benefits for each project.
>
> For each project, staff will use the criteria from https://ww2.arb.ca.gov/resources/documents/cci-quantification-benefits-and-reporting-materials?corr to evaluate the AB 1550 benefits and to develop project solicitation and grant requirements. As project funds are expended, CARB will report the AB 1550 benefits in future Annual Reports to the Legislature on California Climate Investments Using Cap-and-Trade auction proceeds.

CCI Guideline Requirement: Target funding, to the extent feasible, for projects that benefit priority populations and when selecting projects for a given investment, give priority to those that benefit disadvantaged communities.

> **CARB Action:** The FY 2022-23 Funding Plan includes a mix of projects that are available statewide on a first-come, first-served basis and those that are limited to disadvantaged communities, low-income communities, or low-income households. These are clearly specified in the Funding Plan. Many of CARB's equity projects are limited to disadvantaged and low-income communities or low-income households to make sure that these innovate clean transportation projects focus exclusively on benefiting priority populations. In cases where projects are not limited to

disadvantaged communities, many grant agreements that include a requirement to focus outreach on disadvantaged communities to increase participation in those communities.

For the statewide first-come, first-served projects such as HVIP and CORE, staff has incorporated project criteria intended to increase benefits to disadvantaged communities and low-income households. For both HVIP and CORE, voucher amounts are higher for vehicles that operate in disadvantaged communities in order to encourage fleets to use the ZEVs and equipment funded with these incentives in the most impacted communities.

Outreach is being increasingly focused on disadvantaged and low-income communities and low-income households. Specifically, CARB is increasing outreach efforts to focus on communities that have been historically marginalized such as African American and tribal communities. CARB is dedicating part of its FY 2022-23 transportation equity funds to support outreach, community transportation needs assessments, technical assistance, capacity building, and the Access Clean California project. These project elements are designed to increase awareness of and enable more efficient implementation of CARB's Low Carbon transportation equity projects, and expand participation by low-income households, disadvantaged communities, low-income communities.

CCI Guideline Requirement: Create or modify program guidelines or procedures to meet or exceed AB 1550 program targets.

CARB Action: This Funding Plan outlines the procedures CARB is taking to meet or exceed AB 1550 targets within each project section.

CCI Guideline Requirement: Design programs and select projects that avoid substantial burdens to residents of disadvantaged and low-income communities, such as physical displacement of low-income or disadvantaged community residents or businesses, including small-, women-, and/or minority-owned businesses; or increased exposure to toxics or other health risks.

CARB Action: In designing the projects in the Funding Plan, staff is careful to avoid or minimize potential substantial economic, environmental, and public health burdens. Any potential substantial burdens are identified early in the project development process and are discussed with stakeholders through the public workshop and work group process.

CCI Guideline Requirement: Implement outreach efforts that seek to directly engage and involve local community residents and CBOs in disadvantaged and low-income communities. Provide direct outreach to disadvantaged communities and identify an agency point or contact to provide the information on funding opportunities and to coordinate with other state agencies on California Climate Investments.

CARB Action: CARB has taken multiple actions to outreach to disadvantaged communities, low-income communities, and low-income households.

Hire dedicated staff: CARB has hired dedicated staff to assist with disadvantaged community and low-income household outreach on Low Carbon Transportation investments and help ensure these communities are aware of funding opportunities. As part of this, CARB is working with liaisons from state agencies administering California Climate Investments to better share information at community events, so citizens can have access to all relevant California Climate Investments opportunities. This includes participating in the inter-agency California Climate Investments Outreach Work Group and collaborating with the Strategic Growth Council on the California Climate Investments Outreach & Technical Assistance Program.

Conduct outreach to help potential applicants access funding, particularly for priority populations: CARB's multi-faceted outreach effort to support its Low Carbon Transportation Program and help ensure priority populations are aware of funding opportunities is summarized earlier in this chapter. These outreach efforts include the following elements:

- **Outreach events and pilots:** CARB has an enhanced outreach/education program on the Low Carbon Transportation Program with a disadvantaged community focus. An important part of the effort is dedicated to assessing the needs of the communities and piloting training and fellowship opportunities. CARB is partnering with stakeholders, such as CBOs, community advocates, and environmental justice groups to provide training and conduct outreach at community events aimed at explaining available incentives and increasing the community's awareness of these programs. CARB reports on the outreach events for its Low Carbon Transportation Program as part of each year's Annual Report to the Legislature on California Climate Investments. The list of public meetings held in 2021 across all of the state's California Climate Investments programs is available in an Excel file on the Annual Report website: https://www.caclimateinvestments.ca.gov/annual-report.
- **Website:** CARB has developed a user-friendly Moving California website to promote Low Carbon Transportation projects and increase awareness about funding opportunities and projects that have been funded: https://ww2.arb.ca.gov/sites/default/files/movingca/movingca.html.
- **Outreach by grantees:** As a part of project solicitations, CARB requires that applicants provide information on how they will outreach to disadvantaged communities, and their applications are scored in part on the quality of the outreach proposal. Each of CARB's grantees conducts outreach related to their project by focusing on increasing outreach for priority populations, including historically marginalized communities such as African American and tribal communities.
- **Access Clean California:** CARB implements Access Clean California to address a priority recommendation identified in CARB's SB 350 Guidance Document to increase awareness for low-income residents by expanding education and outreach on clean transportation and mobility options. One of the primary

objectives of Access Clean California is to provide coordinated community-based outreach and education to maximize Low Carbon Transportation program participation and promote advanced technology vehicle adoption in disadvantaged communities, low-income communities, and low-income households. Additionally, CARB is implementing several outreach coordination strategies through Access Clean California identified in the SB 350 Strategic Outreach Roadmap as outlined below. CARB continues to hear from African American and tribal governments that meaningful outreach has not occurred in their communities, and because of this, they have not had the same opportunities as others to benefit from incentives. CARB is working to identify outreach strategies and funding opportunities to ensure communities are involved in the decision-making process for investments and have equitable access to funding. In the Funding Plan, additional funding will be allocated to continuing this project.

- **Outreach Plan:** CARB led the development of the Strategic Outreach Roadmap to increase low-income residents' awareness of clean transportation and mobility options to address a priority recommendation identified in the SB 350 Guidance Document. CARB is leading implementation of the SB 350 Outreach Strategic Roadmap with the goal of improving state and local coordination and content development, tailoring and delivery of information, as well as strategies that will increase awareness of clean transportation and mobility options through improved education and information access for low-income residents across the state. The Roadmap includes actions intended to strengthen collaboration and partnerships, outreach to low-income residents in urban, rural, and tribal communities based on community-identified needs and increase the ability to participate in CARB or related incentive programs. During the development of the roadmap, CARB convened working groups consisting of both internal and external stakeholders to solicit feedback and identify outreach and community engagement best practices.

CCI Guideline Requirement: Ensure transparency and accountability and provide public access to program information.

CARB Action: All CARB grant agreements with funding recipients require grantees to collect and report to CARB all data necessary regarding AB 1550 benefits. This includes all information described in Section VI (Reporting Requirements) of the CCI Guidelines. CARB uses this information to provide input for the Annual Report to the Legislature on California Climate Investments Using Cap-and-Trade Proceeds including the AB 1550 benefits of Low Carbon Transportation investments.

CCI Guideline Requirement: When evaluating projects for benefiting priority populations, implementing agencies must assess how potential projects meaningfully meet a community or household need. The CCI Guidelines provides a list of common needs identified by community advocates during the development of the guidelines. Letters of

community support can also be used to document that investments address a community need.

CARB Action: Staff has reviewed the commonly identified needs of priority populations in the CCI Guidelines. The needs being met by proposed FY 2022-23 Low Carbon Transportation investments are shown in Table 34 below.

Table 34: Common Needs of Priority Populations Addressed by Proposed FY 2022-23 Low Carbon Transportation Investments

Need	Description
Public Health, Need 1	Reduce health harms suffered disproportionately by priority populations due to air pollutants. *All Low Carbon Transportation projects meet this need. All projects reduce criteria air pollutants and/or toxic air contaminants as co-benefits thereby reducing health harms due to air pollutants, and a portion of funding from all projects will benefit priority populations.*
Economic, Need 5	Reduce transportation costs and improve access to public transportation. *The Low Carbon Transportation projects that provide consumer incentives for more fuel-efficient vehicles meet this need. These include Clean Cars 4 All, Financing Assistance, CMO, and STEP.*
Economic, Need 10	Provide educational and community capacity building opportunities through community engagement and leadership. *In this Funding Plan, staff proposes to allocate funds directly to outreach, community transportation needs assessments, technical assistance and workforce training and development efforts. Additionally, public outreach is an element of many Low Carbon Transportation projects. For the clean transportation equity projects in particular, CARB will continue to require that grant awardees have strong community-based experience and commit to conduct extensive outreach and education tailored to the communities' projects will serve.*
Environmental, Need 1	Reduce exposure to local environmental contaminants, such as toxic air contaminants, criteria air pollutants, and drinking water contaminants. *All Low Carbon Transportation projects meet this need because they reduce criteria air pollutants and/or toxic air contaminants as co-benefits.*
Environmental, Need 2	Prioritize ZEV projects for areas with high diesel air pollution, especially around schools or sensitive populations with near roadway exposure. *The Low Carbon Transportation projects that provide incentives for ZEVs to replace diesel vehicles meet this need. These include HVIP, CORE, CMiS, and demonstration and pilot projects.*

In addition, CARB staff also meets routinely with community and environmental groups during each year's Funding Plan development process to get their direct input on the projects they would like to see funded. CARB also meets with these groups after the Funding Plan is adopted to make sure that community groups' input in incorporated into the project implementation phase.

CCI Guideline Recommendations: In addition to the requirements summarized above, the CCI Guidelines list a number of recommended program design strategies for targeting investments to priority populations.

CARB Action: In developing the FY 2022-23 Funding Plan, staff utilized a number of these strategies, including:

Encourage projects that contribute to other state climate goals: Many of the projects in this Funding Plan contribute to a variety of the state's climate goals. A list of the state's climate goals that are addressed by the Funding Plan is included in Chapter 1.

Coordinate investments and leverage funds where possible to provide multiple benefits and to maximize benefits: CARB staff coordinates with other agencies and meets with stakeholders both in individual meetings and in public work group meetings and workshops to discuss ways to maximize project benefits. A number of the projects leverage private investments and other government investments where possible. CARB is actively working to better coordinate its heavy-duty ZEV investments closely with CEC's infrastructure investments, so it is easier for fleets to access infrastructure funding when they purchase ZEVs. CARB is also partnering with CEC to co-fund zero-emission workforce training and development projects in low-income and disadvantaged communities through the IDEAL ZEV Workforce Pilot and planned transportation electrification pre-apprenticeship program

Set aside a portion of funding for projects benefiting priority populations: Funding for CMO, CMiS, and STEP are all limited to disadvantaged communities or disadvantaged and low-income communities. The demonstration and pilot projects are limited to disadvantaged communities. Clean Cars 4 All and Financing Assistance funding is limited to lower-income consumers. The Financing Assistance project and Statewide Clean Cars 4 All is moving to a needs-based approach where consumers' applications will be prioritized depending on their location and financial situation.

Offer higher incentive amounts for projects benefiting priority populations: HVIP and CORE provide higher voucher amounts for zero-emission trucks, buses, and off-road equipment that operate in disadvantaged communities. Staff is proposing increased incentives for Clean Cars 4 All recipients that live directly in a disadvantaged community census tract.

Chapter 6: Contingency Provisions

The proposed FY 2022-23 Funding Plan is based on the latest available information. However, circumstances may change between the time the Funding Plan is released for public comment and when the Board approves the Funding Plan, project solicitations are issued, project funds awarded, or as projects are implemented. This section describes staff's proposed contingency plans should mid-course corrections be needed to ensure that funds are spent expeditiously, efficiently, and where the need is the greatest. Under these provisions, the Board would grant the Executive Officer authority to make adjustments as necessary.

Low Carbon Transportation Appropriation

CARB was appropriated $746 million from GGRF for its Low Carbon Transportation Program. Section 15.14 of the Budget Act of 2022 specifies that "no department shall encumber or commit more than 75 percent of any appropriation prior to the fourth Cap-and-Trade auction in the 2022-23 FY. Upon determination of the final amount of auction proceeds after the fourth Cap-and-Trade auction, the Department of Finance shall make a final determination for the expenditure of the remaining auction proceeds." If CARB does not receive authorization to spend the full amount, staff will propose to scale back all projects proportionally and/or hold a public work group meeting if other changes are proposed.

AQIP Funding Levels

Over past funding cycles, AQIP revenues were sometimes lower than the levels included in the state budget, and project solicitations had to be scaled back. AQIP appropriation levels have been adjusted in the state budget in recent years to more closely track anticipated revenues, so staff does not expect needing to scale back AQIP funding in the FY 2022-23 funding cycle.

Additional Funding Sources

If funding from other sources is provided for any of the project categories authorized in the Funding Plan, these outside funds will be allocated as needed for projects or as specifically required by the authorizing entity. Additionally, projects receiving additional funding may be altered to accommodate any conditions placed upon the use of alternative sources of funding as long as these conditions are consistent with the statutory provisions for Low Carbon Transportation and AQIP. Staff will consult with project work groups prior to making any changes to projects.

Project Demand

Staff plans to issue initial solicitations and grant agreements based on the allocations listed in Table 6 (Chapter 2). However, these solicitations and grant agreements will be written with provisions to allow an increase in awarded funding if there are sufficient revenues and project demand. Some solicitations may be written to allow for the potential use of funding from

FY 2023-24 or other future budget year to meet excess demand subject to approval by the Board as part of the FY 2023-24 Funding Plan. Conversely, staff proposes that the Executive Officer have the ability to reallocate funding from any project in the event that demand does not materialize or if it is determined that the project is not viable as envisioned in the Funding Plan (e.g., a technology considered for demonstration or pilot deployment is not ready to be funded, or sufficient staff resources are not available). In this case, funds would be reallocated within the same project category or sector. For example, if demand falls short for one of the transportation equity projects, CARB would shift that funding to another transportation equity project. Any changes in funding for a particular project category would be publicly vetted through a public project work group process.

When CARB is evaluating solicitations, there may be cases where funding has been awarded to the highest scoring applications and the remaining available funds are less than the amount requested in the next highest scoring application. In these cases, staff proposes that the Executive Officer have the authority to offer funding to the next highest scoring project(s) at a scaled down scope, carry the remaining funds forward to the future FY, shift the funds to another project category, or offer funding to any unfunded projects at their discretion.

Project Continuity Between Funding Cycles

A primary goal of the vehicle purchase incentive projects is to grow the market for clean technologies. Waitlists and disruptions caused by insufficient funding can adversely impact the market and reduce consumer confidence in the programs. To address these concerns, staff proposes contingency provisions to prevent, or reduce interruptions to ongoing voucher and rebate consumer purchase incentive projects in the event that one or more of such projects is either temporarily on hold, only accepting applications to waitlists, or in jeopardy of shutting down due to lack of funding prior to consideration of the FY 2023-24 Funding Plan. If CARB is appropriated Low Carbon Transportation funding, AQIP funding or funds from a different source, and the Executive Officer determines that CVRP, Financing Assistance, Clean Cars 4 All, HVIP, CORE, or Truck Loans would run out of funding prior to Board consideration of the FY 2023-24 Funding Plan, the Executive Officer would have the authority to allocate a combined total of up to 20 percent of the funds to the aforementioned projects and amend existing grant agreements to add the early allocation. Should the Legislature appropriate funds to specific projects, the Executive Officer would have the authority to immediately allocate up to the maximum amount of funding to the specified projects as directed by the Legislature.

Additionally, to avoid disruptions to ongoing projects, staff proposes the Executive Officer have the authority to establish applicant waiting lists for CVRP, Financing Assistance, CMO, HVIP, CORE, or Truck Loans in the event funding is exhausted prior to the end of the funding cycle. If any of these projects end up with waiting lists, the Executive Officer would have the authority to amend the existing grant agreements to add future years funding upon the appropriation of funding to CARB for such projects.

Technical or Administrative Changes

The Funding Plan specifies all policy-related details regarding the projects to be funded. However, technical or administrative changes from what is set forth herein may be needed from time to time to ensure these projects are successful. Staff proposes a transparent process in which changes to a project category would be publicly vetted through the project work group process that has been established to discuss the implementation details of each project. For several project categories, staff is already planning to use the public work group process to finalize technical details prior to issuing solicitations.

Chapter 7: Grant Administration

This chapter addresses project costs and provisions for advanced payments in grant agreements.

Project Costs

Grants include indirect costs and direct project costs that support implementation and technology associated with the project. Staff reviewed grants from various project types to identify the common definitions associated with costs within grants. Indirect costs and direct project costs are defined and identified within each grant agreement, and sometimes vary depending upon the needs of that particular project. Project costs should be detailed such that they include all necessary staff, tasks, and materials needed to implement the project. If appropriate, this includes activities such as outreach and education, research, data management, and reporting.

Advance Payments to Grantees:

Consistent with the Legislature's direction to expeditiously disburse grants, CARB may provide advance payments to support project initiation and implementation of grants with a focus on mitigating the constraints of modest reserves and potential cash flow problems. SB 854 (Section 39603.1 of the Health and Safety Code) allows this as described below:

"a) Notwithstanding any other law, the state board may provide advance payments to grantees of a grant program or project if the state board determines all of the following:

(1) The advance payments are necessary to meet the purposes of the grant program or project.
(2) The use of the advance funds is adequately regulated by grant or budgetary controls.
(3) The request for application or the request for proposals contains the terms and conditions under which an advance payment may be received consistent with this section.
(4) The grantee is either a small district or the grantee meets all of the following criteria:
    (A) Has no outstanding financial audit findings related to any of the moneys eligible for advance payment and is in good standing with the Franchise Tax Board and Internal Revenue Service.
    (B) Agrees to revert all unused moneys to the state if they are not liquidated within the timeline specified in the grant agreement.
    (C)
        (i) Submits a spending plan to the state board for review prior to receiving the advance payment.
        (ii) The spending plan shall include project schedules, timelines, milestones, and the grantee's fund balance for all state grant programs.
        (iii) The state board shall consider the available fund balance when determining the amount of the advance payment.
    (D) Reports to the state board any material changes to the spending plan within 30 days.

(E) Agrees to not provide advance payment to any other entity.

(5) In the event of the nonperformance of a grantee, the state board shall require the full recovery of the unspent moneys. A grantee shall provide a money transfer confirmation within 45 days upon the receipt of a notice from the state board.

The state board, in consultation with the Department of Finance, shall adopt a regulation implementing this section to ensure the moneys are used properly.

(Added by Stats. 2018, Ch. 51, and Sec. 11. (SB 854) Effective June 27, 2018.)

Pursuant to the directive in 39603.1 for CARB to develop an implementing regulation in consultation with the Department of Finance, Title 17, California Code of Regulations, Sections 91040-91044 was promulgated and effective as of January 1, 2021.

Acronym List

1. AB – Assembly Bill
2. APCD – Air Pollution Control District
3. AQIP – Air Quality Improvement Program
4. AQMD – Air Quality Management District
5. BEV – battery electric vehicle
6. CalEnviroScreen – California Communities Environmental Health Screening Tool
7. Cal-ITP – California Integrated Travel Project
8. Caltrans – California Department of Transportation
9. CalSTA – California State Transportation Agency
10. CAPCOA – California Air Pollution Control Officers Association
11. CARB – California Air Resources Board
12. CBO – community-based organization
13. CEC – California Energy Commission
14. CHDC – Community Housing Development Corporation
15. CMiS – Clean Mobility in Schools Pilot Project
16. CMO – Clean Mobility Options
17. CO2 – Carbon Dioxide
18. CORE – Clean Off-Road Equipment Voucher Incentive Project
19. CPCFA – California Pollution Control Financing Authority
20. CPUC – California Public Utilities Commission
21. CSA – California State Auditor
22. CSE – Center for Sustainable Energy
23. CTNA – Community Needs Assessment
24. CVA Program – Clean Vehicle Assistance Program
25. CVRP – Clean Vehicle Rebate Project
26. DMV – Department of Motor Vehicles
27. EFMP – Enhanced Fleet Modernization Program
28. E-bike – electric bicycle
29. ePTO – electric power take-off
30. EV – electric vehicle
31. EVITP – Electric Vehicle Infrastructure Training Program
32. EVSE – electric vehicle supply equipment
33. FCEV – fuel cell electric vehicle
34. FY – fiscal year
35. GHG – greenhouse gas
36. GoBIZ – Governor's Office of Economic and Business Development
37. HVIP – Hybrid and Zero-Emission Voucher Incentive Program
38. IRS – Internal Revenue Service
39. MPV – Mobility Project Voucher
40. MSRP – Manufacturer's Suggested Retail Price
41. NOx – nitrogen oxides
42. OBI – Othering and Belonging Institute
43. PHEV – plug-in hybrid-electric vehicle

44. ROG – Reactive Organic Gas
45. SB – Senate Bill
46. STEP – Sustainable Transportation Equity Project
47. UC – University of California
48. V2G – Vehicle-to-Grid
49. VMT – Vehicle miles traveled
50. VW – Volkswagen
51. ZEV – zero-emission vehicle