Proposed
Fiscal Year 2021-22 Funding Plan
for
Clean Transportation Incentives

Covering the Following Funding Sources:

- $838 million from the State General Fund
- $595 million from the Greenhouse Gas Reduction Fund for Low Carbon Transportation
- $86.45 million from the Air Pollution Control Fund
- $28.64 million from the Air Quality Improvement Fund

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Executive Summary

The State budget for Fiscal Year (FY) 2021-22 included a total of over $1.5 billion for a Zero-Emission Vehicle (ZEV) Acceleration Package and the Air Quality Improvement Program for the California Air Resources Board (CARB or Board). These investments represent the first installment of a proposed multi-year ZEV Acceleration Package that will provide a total of $3.9 billion to multiple State agencies over the next three fiscal years to build on the investments in ZEVs and ZEV infrastructure the State has made over the past decade. The proposed investments are designed to accelerate an equitable ZEV transition, in both the light-duty and heavy-duty transportation sectors.

For CARB, a total of over $2.3 billion is proposed over the next three years. The ZEV Acceleration Package is comprised of funding from the Cap-and-Trade Expenditure Plan (including Low Carbon Transportation), the General Fund, and the Air Pollution Control Fund. While the multi-year proposal allows staff to plan and strategize investments, funds will only be allocated after the Legislature acts on the respective years' budgets. As a result, the FY 2021-22 Funding Plan for Clean Transportation Incentives will include the $1.5 billion of funding appropriated to CARB in the Budget Act of 2021 as amended by Senate Bill (SB) 129 (Skinner, Chapter 69, Statutes of 2021) and SB 170 (Skinner, Chapter 240, Statutes of 2021).

Each year, CARB submits a proposed Funding Plan to the Board for approval. The Funding Plan serves as the blueprint for expending the Low Carbon Transportation and Air Quality Improvement funds appropriated to CARB in the State budget. This year the funds appropriated to CARB from the Cap-and-Trade auction proceeds were augmented by General Fund and Air Pollution Control Fund dollars.

The sources of funding appropriated to CARB for the ZEV Acceleration Package through the Budget Act of 2021 covered in this Funding Plan are:

- $838 million from the State's General Fund.
- $595 million for Low Carbon Transportation Investments funded with Cap-and-Trade auction proceeds.
- A one-time investment of $86.45 million from the Air Pollution Control Fund.
- $28.64 million for the Air Quality Improvement Program (AQIP).

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, and climate change goals. Staff coordinates regularly with other State agencies and local air districts to ensure these investments are complementary. CARB and the California Energy Commission (CEC) are coordinating closely on the implementation of the ZEV Acceleration Package to ensure that the vehicle investments proposed in this plan are complemented by supporting infrastructure.

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,* and the *ZEV Action Plan*. 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 proposed 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 updates to the SB 1275 (de León, Chapter 530, Statutes of 2014) Three-Year Plan for CVRP and the ZEV Market and the SB 1403 (Lara, Chapter 370, Statutes of 2018) Long-Term Heavy-Duty Investment Strategy and State School Bus Incentive Program Report. Additionally, this year's plan proposes enhanced metrics and evaluation methodology in line with the recommendations from the California State Auditor's recent report.[1]

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

[1] 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

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, ZEV Market, Clean Transportation Equity Investments, and Outreach played key roles in this assessment. Staff also considered which projects have remaining funds allocated in previous fiscal years, other available funding sources, and stakeholder input. Staff's proposed funding allocations are shown in Table 1.

Table 1: Proposed Project Allocations

Project Category	Allocation* (Millions)
Vehicle Purchasing Incentives—CVRP	**$525**
Clean Vehicle Rebate Project (CVRP)	$515
Electric Bicycle Incentives	$10
Clean Transportation Equity Investments	$150
Clean Cars 4 All	$75
Financing Assistance	$23.5
Clean Mobility Options	$10
Clean Mobility In Schools	$10
Sustainable Transportation Equity Project (STEP)	$25
Outreach, Community Needs Assessments, Technical Assistance, and Access Clean California	$5
Workforce Training and Development	$1.5
Heavy-Duty and Off-Road Equipment	$873.09
Demonstration and Pilot Projects	$80
Clean Truck and Bus Vouchers (HVIP)	$569.5
Clean Off-Road Equipment Vouchers (CORE)	$194.95
Truck Loan Assistance	$28.64
Total	**$1,548.09**

**Does not include any adjustments for project administration*

Vehicle Purchase Incentives—CVRP

The Legislature approved $525 million for consumer rebates to reduce the price for new ZEV purchases through CVRP. These funds represent a substantial upfront investment as part of the ZEV Acceleration Package, intended to last three years, to address the recent increase in consumer demand since the January Budget proposal and support the earliest ZEV adopters. In line with legislative direction, staff proposes a ramp-down plan for CVRP based on

cumulative electric vehicle sales that maintains inclusion of a standard rebate coupled with continued support for lower income ZEV purchasers. The plan includes modest adjustments over the next three years to the existing program criteria, setting the program to accelerate into a continuing transition to a stronger equity focus in future years. Along with rebates for vehicles, $10 million will support rebates for electric bicycles. CARB will develop this new program with close attention to equity considerations.

Clean Transportation Equity Investments

The $150 million for clean transportation equity projects will help to 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 covers vehicle purchase incentives, clean mobility investments, outreach, community transportation needs assessments (needs assessments), technical assistance and capacity building, Access Clean California, and workforce training and career development. In line with legislative direction, staff proposes to direct $75 million of the clean transportation equity funds to Clean Cars 4 All. This year, staff proposes to use the funds to continue to support and expand existing projects, including expanding Clean Cars 4 All to San Diego, and to allocate funds to directly support workforce training and career development to build environmental literacy and strong pathways to green jobs. Additionally, staff is proposing to transition the Rural School Bus Pilot Project from a pilot to a full-scale project implemented through HVIP.

CARB will also continue, and look to expand, critical investments in transportation system and planning programs, which increase transportation choices and which can reduce vehicle miles traveled. Vehicle replacement programs, though of great importance, are best complemented by efforts to reduce vehicle dependence. As CARB has highlighted in multiple reports, including in response to SB 150 (Allen, Chapter 646, Statutes of 2017), vehicle miles travelled (VMT) have continued to increase, off-setting the benefits of cleaner vehicles. To meet California's climate goals, Californians will need to have appealing transportation options – including walking, biking, and public transit – that can replace vehicle trips. The Funding Plan programs responding to these needs, including the Clean Mobility Options and Sustainable Transportation Equity Programs, provide a valuable counterpart to the vehicle-focused programs.

Heavy-Duty and Off-Road Equipment

CARB will invest the $873 million for heavy-duty and off-road equipment following the principles of the portfolio approach. This means that CARB provides funding across multiple technologies at different points on their commercialization arcs to support those that are ready for commercial deployment today, as well as those that need to mature to meet federal air quality mandates and State climate goals. Additionally, this year funds will be prioritized for drayage trucks, transit buses, and school buses, all of which are primed to rapidly continue the transition to zero-emission, in part as a result of the success of previous investments. Staff is also introducing a new set-aside through HVIP called Innovative Small e-Fleets that will support zero-emission technology adoption for owner operators and small

fleets in advance of upcoming regulations. Finally, staff is proposing to expand 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, known as CORE. The proposed expansion of CORE includes $30 million of dedicated funds for zero-emission small off-road equipment such as leaf blowers, lawn mowers, and portable generators for small businesses or sole proprietors who provide professional landscaping services in California.

Disadvantaged Community, Low-Income Community, and Low-Income Household Investment Targets

A key component of these programs is providing health and economic benefits to California's most disadvantaged communities, low-income communities, and low-income households, collectively referred to as "priority populations".[2] Assembly Bill (AB) 1550 (Gomez, Chapter 369, Statutes of 2016) establishes disadvantaged community, low-income community, and low-income household targets for the State's Cap-and-Trade auction proceeds investments. Staff has designed projects with additional incentives to benefit priority populations, and in some cases has instituted eligibility requirements that target investments to benefit priority populations. In addition, staff will continue to focus outreach in order to help increase investments in low-income and disadvantaged communities. Staff recommends that at least 60 percent of the Low Carbon Transportation appropriation be invested in projects that meet the criteria for providing direct, meaningful, and assured benefits to priority populations with the following targets:[3]

- At least 45 percent of funds for projects located within, and benefiting individuals living in, disadvantaged communities.
- At least 15 percent of funds for projects within and benefiting low-income communities or benefiting low-income households, or within and benefiting low-income communities within a half-mile of a disadvantaged community.

These targets represent a substantial increase over the 35 percent statutory minimum and also represent an increase from the 50 percent target set in recent years. Staff considers the targets to be a floor and strives to exceed them. In designing project solicitations and implementation requirements, staff will consider whether there are provisions that can be incorporated to help ensure that CARB exceeds these minimum targets.

California Environmental Quality Act (CEQA) Requirements

CARB has determined that the proposed FY 2021-22 Funding Plan is not a project subject to, or is otherwise exempt from, the requirements of the California Environmental Quality Act

[2] Priority populations include residents of: (1) census tracts identified as disadvantaged by California Environmental Protection Agency per SB 535; (2) census tracts identified as low-income per AB 1550; or (3) low-income household per AB 1550. See Section VII.B of CARB Funding Guidelines for more information on the definitions of priority populations.

[3] Benefit Criteria Tables for determining benefits to priority populations: https://ww2.arb.ca.gov/resources/documents/cci-quantification-benefits-and-reporting-materials?corr

(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. (Title 14 California Code of Regulations (CCR) section 15251(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. (Title 17 CCR sections 60000-60008.)

CARB, as the lead agency under CEQA, has reviewed the proposed FY 2021-22 Funding Plan and concluded that it is not a "project" under CEQA, as that term is defined under title 14 CCR section 15378, subsection (b)(4), and thus is not subject to CEQA review. Title 14 CCR section 15378, subsection (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 2021-22 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 2021-22 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 2021-22 Funding Plan proposes budgetary allocations for these projects over the next fiscal year.

Even if the FY 2021-22 Funding Plan were a project under CEQA, it would be exempt from CEQA. First, the FY 2021-22 Funding Plan would be categorically exempt from CEQA under the common sense exemption. (Title 14 CCR section 15061(b)(3).) CEQA Guidelines state, "the activity is covered by the general rule 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." (Title 14 CCR section 15601(b) (3).) Second, the FY 2021-22 Funding Plan would be exempt from CEQA under the "Class 8" exemption for its protection of the environment. (Title 14 CCR section 15308.)

The FY 2021-22 Funding Plan is exempt from CEQA under the common sense and Class 8 exemptions for the same reason: the FY 2021-22 Funding Plan's overall effect is beneficial to air quality and, as a result, protects and enhances the environment.[4] As mentioned above, the FY 2021-22 Funding Plan proposes budgetary allocations to CARB's clean transportation

[4] CEQA Guidelines define "environment," in relevant part, as "the physical conditions which exist within the area which will be affected by a proposed project including land, *air*, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.... [and] includes both natural and man-made conditions." (Title 14 CCR section 15360.) (emphasis added)

incentives including clean vehicle rebate and voucher programs. The programs or projects receiving funding under the FY 2021-22 Funding Plan are aimed at incentivizing further ZEVs and low-emission vehicles 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 will be replacing older, more-polluting vehicles, which will have a beneficial impact on the air quality. Thus, based on CARB's review, it can be seen with certainty that there is no possibility that the proposed FY 2021-22 Funding Plan may result in a significant adverse impact on the environment. Further, the proposed action is designed to protect and enhance the environment, and 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 (Title 14 CCR section 15300.2). Therefore, even if the FY 2021-22 Funding Plan were a project under CEQA, it would be exempt from CEQA.

Chapter 1: Introduction and Background

Over the past decade, the State's investments in clean transportation have seen considerable growth and produced extraordinary returns for the State. Since their inception, the two investment programs encompassed within the Clean Transportation Incentives, the Air Quality Improvement Program (AQIP) and Low Carbon Transportation Investments, have contributed over $2.5 billion to projects that accelerate the State's progress towards its numerous air quality, climate change, clean transportation equity and mobility, and petroleum use reduction goals.

These incentives are paving the way to transform the State's transportation sector to provide a healthier, sustainable, and more resilient future. The large-scale statewide investments CARB makes through these programs help send a market signal and move the needle in terms of advancing technologies. The State's investments of over a billion dollars in consumer rebates for ZEV passenger vehicles, for example, has contributed to California leading the nation in ZEV deployment and making ZEVs and their components the State's largest export.[5] These incentives, combined with CARB's ZEV regulation, set the stage for Governor Newsom's Executive Order N-79-20, to accelerate the deployment of ZEVs.[6] Together, regulations and large-scale investments support the goal to electrify the heavy-duty sector, which has seen significant growth in the availability and deployment of a wide variety of zero-emission vehicle types and manufacturers. These investments also set California up to benefit from the green economy with companies locating zero-emission vehicle and component manufacturing operations in the State.

While the funding contained within this Funding Plan represents a substantial investment, it is only a portion of the broader portfolio of funding CARB administers. 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, these projects address multiple goals, including:

- Turning over the legacy fleet 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 clean transportation and mobility options for low-income households and investing in the communities most impacted by pollution in support of equity and environmental justice goals.
- Supporting the transition to and adoption of more sustainable transportation modes to reduce vehicle miles traveled (VMT) and greenhouse gas emissions (GHGs).

[5] "State Exports from California". United States Census Bureau. https://www.census.gov/foreign-trade/statistics/state/data/ca.html Accessed July 17, 2021.
[6] Executive Order N-79-20 https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf

- 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 technology.
- 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, and associated green jobs.

The proposed Funding Plan describes CARB's policy drivers and vision for these clean transportation investments, eligible project categories and criteria, project funding allocations, project implementation details, including project evaluation strategies, and the justification for these investments.

Funding Plan Goals and Priorities

CARB's 2017 *Climate Change Scoping Plan, California Sustainable Freight Action Plan,* and the *Mobile Source Strategy* conclude that many of the same actions are needed to meet GHG, smog forming, and toxic pollutant emission reduction goals – specifically, a transition to zero-emission technologies and use of the cleanest, lowest carbon fuels and energy across all vehicle and equipment categories.[7,8,9] 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. The *2018 Progress Report on California's Sustainable Communities and Climate Protection Act* (SB 150 Progress Report) points to the need for adopting alternative modes of transportation wherever possible, and particularly in low-income and disadvantaged communities.[10]

The clean air goals and priorities driving the investments contained within this Funding Plan 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.

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[7] California Air Resources Board. *California's 2017 Climate Change Scoping Plan.* November 2017. https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/scoping_plan_2017.pdf
[8] 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
[9] California Air Resources Board. *Proposed 2020 Mobile Source Strategy*. September 2021. https://ww2.arb.ca.gov/sites/default/files/2021-09/Proposed_2020_Mobile_Source_Strategy.pdf
[10] California Air Resources Board. *2018 Progress Report: California's Sustainable Communities and Climate Protection Act.* November 2018. http://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report_SB150_112618_02_Report.pdf

- 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 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 goals of Sustainable Communities consistent with SB 375 (Steinberg, Chapter 728, Statutes of 2008); exploring ways 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 1990 levels by 2020 consistent with AB 32 (Núñez, Chapter 488, Statutes of 2006) and 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 by 2023 and 2031 as well as the fine particulate matter air quality standards.
- 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.*[13]
- Following and incorporating goals and priorities from relevant legislation, striving to exceed these goals wherever possible. Some of the key bills guiding the Funding Plan include SB 1275, SB 1204 (Lara, Chapter 524, Statutes of 2014), SB 350, SB 1403, AB 2285 (Committee on Transportation, Chapter 100, Statutes of 2020), AB 841 (Ting, Chapter 372, Statutes of 2020), and SB 129.
- Addressing 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).[14]

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[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. *Short-Lived Climate Pollutant Reduction Strategy*. March 2017. https://ww2.arb.ca.gov/sites/default/files/2020-07/final_SLCP_strategy.pdf

[14] 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

The investments covered in the proposed FY 2021-22 Funding Plan represent just one part of California's portfolio of clean transportation incentives. These are complemented by other CARB, State agency, and local air district programs, as well as actions taken by other local government entities. For example, CARB coordinates closely with CEC to ensure that the investments made in the funding plan are complemented by CEC's investments in infrastructure. Each program has its own statutory and policy direction, but collectively they fit together to support California's multiple public heath, air quality, and climate change goals. The Clean Transportation Incentives play a unique role in CARB's broader portfolio as the primary funding source for heavy-duty demonstrations and pilots. They are also the only funding sources for light-duty investments and directly address clean transportation equity and provide options for financing assistance. Low Carbon Transportation Investments and AQIP play an important role as the bridge for emerging technology and innovative clean transportation projects to the rest of the CARB portfolio. More details on each of the CARB programs can be found in Appendix D, and a description of the cost-effectiveness of each program is found in Appendix H.

This plan's focus on deploying zero-emission mobile source technologies is just one 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 vehicle miles traveled, and lessen petroleum dependency. Providing health and economic benefits to priority populations are key components of these programs. CARB staff strives to develop and implement incentives with a focus on providing benefits to priority populations wherever possible.

Intentional Benefits to Communities

Low-income and disadvantaged communities, particularly communities of color, continue to experience disproportionately high levels of air pollution and the resulting detrimental impacts to their health. To address these injustices, equity must be at the forefront of program design, and programs must deliver intentional benefits as well as mitigate or avoid unintended consequences for people of color. As Low Carbon Transportation projects have evolved, CARB has placed increasing focus on targeting the benefits to those who need them most. While progress has been made, staff recognizes that there are areas where further program refinements and better communication would result in improved benefits to communities.

The Greenlining Institute developed the Six Standards for Equitable Investment to "govern funds and programs intended to address poverty and inequity".[15] These critical principles, which were also identified through CARB's SB 350 Guidance Document, include:

- Emphasizing race-conscious solutions.
- Prioritizing multi-sector and multi-discipline approaches in investments.
- Delivering more intentional benefits and minimizing burdens.
- Building community capacity.
- Being community driven at every stage through community inclusion and idea-building.
- Establishing paths towards wealth-building.

Additionally, The Greenlining Institute has conducted a review of various programs, including California's clean mobility equity programs, to "better understand whether and how clean transportation programs truly address equity in a comprehensive and effective way and make use of knowledge gained in recent years." The report, *Clean Mobility Equity: Playbook – Lessons from California's Clean Transportation Programs* highlights a number of best practices and standards along with recommendations for California to ensure that investments are made to better address poverty and inequity.[16]

The Six Standards for Equitable Investments and report recommendations are a part of what is guiding the funding and program design recommendations included in this Funding Plan. Some examples in this Funding Plan include enhancing the focus on workforce training and development, transitioning the Financing Assistance program from a first-come, first-serve approach to a needs based approach, and beginning to shift programs to adopt more targeted approaches to help ensure benefits are intentionally delivered to people, their communities, and to small fleets. The proposal also includes continued investments in capacity building, and community-driven solutions through projects such as Clean Mobility Options and the Sustainable Transportation Equity Project. CARB staff acknowledges and continues to learn how program policies and subsequent changes can better meet the needs of overburdened communities. Staff will continue to increase community outreach and engagement, review current and/or develop new methodologies to better understand the impacts of these investments, increase our work with academia and stakeholders, and provide that information in a clear, concise manner to communicate what is and what is not working.

Program Evaluation

Since the inception of the AQIP in 2008 and subsequent addition of Low Carbon Transportation Investments in 2013, CARB staff has consistently evaluated the various

[15] The Greenlining Institute., *The Greenlined Economy Guidebook*. September 2020. https://greenlining.org/publications/2020/greenlined-economy/

[16] The Greenlining Institute., *Clean Mobility Equity: A Playbook – Lessons Learned from California's Clean Transportation Programs*. March 25, 2021. https://greenlining.org/publications/reports/2021/clean-mobility-transportation-equity-report/

programs through a variety of avenues including, but not limited to, receiving feedback from grantees, consumers, and communities, and utilizing program data collected through surveys, telematics and other evaluation tools. In addition, CARB has funded research contracts with universities to analyze various projects. Staff has also worked with stakeholders that have unique experience understanding overburdened communities, applied equity principles in ways that better direct investments, endeavored to ensure investments are meeting community needs, and met directly with communities who received funding to understand how our programs are working and can be improved.

With the substantial increase in funding, there is increased emphasis on program evaluation and using learnings from those evaluations when making funding and design recommendations to improve programs based on those evaluations. In the recent CARB Audit Report, the State Auditor determined that CARB could do more to measure the GHG emissions reductions or measure socioeconomic benefits for projects where such benefits are a primary objective. CARB staff has acknowledged these recommendations and is working with various stakeholders including academia, grantees, environmental and community organizations and residents to take actions to ensure that the gaps highlighted in the report are filled and future funding and design recommendations are based on solid data collection and analysis. Further discussion of how CARB is addressing all of the recommendations of the CARB audit report are contained in Appendix F.

As part of the FY 2021-22 Funding Plan, staff proposes additional metrics and strategies to evaluate project effectiveness where appropriate, as recommended in the CARB Audit Report. These evaluation enhancements will look beyond long-standing metrics such as emission reductions and focus on measuring behavioral changes, impacts of investing in workforce training and development, and socioeconomic benefits that result from clean transportation incentive projects.

For consumer-focused incentives projects, better understanding how effective the project is at contributing to behavioral changes could allow CARB to make further project refinements. CARB has several existing efforts underway to collect this data—many projects such as CVRP, Clean Cars 4 All and Financing Assistance, already conduct surveys of participants to understand what role the project played in vehicle purchase decisions. Additionally, CARB has contracted with the University of California (UC) Berkeley 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. Staff is currently building upon the efforts above to create streamlined surveys in partnership with internal and external researchers.

For projects identified as having a workforce training and development element, including the Sustainable Transportation Equity Project, Access Clean California, the Workforce Training and Development Project, and the Heavy-Duty Advanced Technology Demonstration and Pilot projects, CARB will work with the stakeholders during solicitation development to identify parameters to measure the quality of job trainings and outcomes experienced by participants. Those parameters may include, but are not limited to, who received training, the credentials participants received as a result, any actual or expected

wages they received as a result of participating in the training or for developing the relevant expertise, and the number of participants from disadvantaged communities or low-income communities and households.

While all projects are designed to address multiple goals, including emission reductions, a primary goal of several projects is to provide socioeconomic benefits for priority populations. For each of these projects, staff will propose strategies and metrics to evaluate the socioeconomic benefits resulting from each project. Staff has identified the following clean transportation projects as primarily providing socioeconomic benefits for these communities:

- Clean Cars 4 All
- Financing Assistance for Lower-Income Consumers
- Clean Mobility Options Projects
- Agricultural Worker Vanpool Pilot Project[17]
- Clean Mobility in Schools
- Sustainable Transportation Equity Project

Greater detail on staff's proposals for evaluation methods and metrics for each project is included in the following chapters. Additionally, for the three projects where financial incentives are paid directly to individual households (CVRP, Clean Cars 4 All, and financing assistance), staff has reported the spending that benefits low-income households (along with low-income communities and disadvantaged communities) in the respective project sections.

Low Carbon Transportation & the ZEV Acceleration Package

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 three 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 $595 million is being augmented by an additional $924 million from the Air Pollution Control Fund and General Fund to equitably develop the ZEV market. This additional funding is described below.

General Fund

In the 2021 State budget, General Fund dollars supplement funding from the Air Pollution Control Fund and Low Carbon Transportation Investments. The ZEV Acceleration Package includes a total of over $3.9 billion, much of which is from the General Fund and anticipated to be appropriated over the next three fiscal years to CARB, the California Energy Commission (CEC), the Governor's Office of Business and Economic Development (GO-Biz), and the California State Transportation Agency (CalSTA). This includes approximately

[17] CARB has paused funding for the agricultural workers vanpools to identify technologies that meet the unique 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.

$1.2 billion to CEC to support infrastructure and ZEV manufacturing grants, $5 million to GO-Biz to support the ZEV Market Development Strategy and $407 million to CalSTA to demonstrate and deploy zero-emission bus and rail equipment and infrastructure. It builds upon previous investments and will provide the additional resources necessary to accelerate the ZEV transition, with a focus on key vehicle segments that are now primed to transition to zero-emission. For FY 2021-22, the State budget provides CARB a total of $838 million to support CVRP, clean trucks, buses, and off-road equipment, and the deployment of zero-emission drayage trucks, school buses, and transit buses.

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. The State budget includes a one-time appropriation of $86.45 million from the Air Pollution Control Fund to support the clean trucks, buses, and off-road equipment. Specifically, the Air Pollution Control Fund dollars included in the ZEV Acceleration Package originate from enforcement settlements with Fiat Chrysler (FCA) and Mercedes-Benz (Daimler).

FCA and Daimler Settlements

As a result of previous violations by automotive manufacturers, CARB and the U.S. Environmental Protection Agency (U.S. EPA) continue to perform enhanced screening on diesel vehicles sold by all manufacturers to detect "defeat devices" in diesel vehicles that are designed to control emissions during certification and vehicle testing, and to illegally reduce the effectiveness of emissions controls during normal driving.

Using the enhanced testing procedures, CARB identified two additional manufacturers that used defeat device software resulting in additional NOx emissions from subject vehicles. Many of these vehicles were marketed to consumers as environmentally friendly, meeting or exceeding California's emissions rules, and providing better fuel economy.

FCA installed, or caused to be installed, emission defeat devices on model year 2014-2016 diesel Jeep Grand Cherokee and Ram 1500s and was ordered to make a mitigation payment of $19.035 million to California. Mercedes-Benz and Daimler AG installed emission defeat devices on model year 2009-2016 passenger vehicles and Sprinter delivery vans and was ordered to make a mitigation payment of $110 million to CARB.

In Budget Act of 2021, the combined $129.035 million from the FCA and Daimler settlements is appropriated to expand existing incentive projects that can mitigate NOx impacts. Specifically, the State budget included $86.45 million to support clean trucks, buses, and off-road equipment through the Clean Transportation Incentives Funding Plan, and the remaining funds are appropriated to augment the Funding Agricultural Replacement Measures for Emission Reductions (FARMER) Program. CARB anticipates that a significant portion of these funds would benefit priority populations based on past investment data.

Low Carbon Transportation Funding to Date

Since 2013, the Legislature has appropriated a total of over $2.1 billion to CARB for Low Carbon Transportation projects. 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 increase access to alternative modes of transportation for priority populations; deployment incentives for clean trucks and buses utilizing zero-emission technologies; and advanced technology demonstration projects for freight trucks and equipment.

To date, 56 percent of CARB's Low Carbon Transportation funding has supported 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 for clean transportation equity projects, Zero-Emission Truck and Bus Pilot Projects, and Advanced Freight Technology Demonstration Projects.

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

Project	Funding Allocated (millions)	Share Benefiting Priority Populations[b]
Clean Transportation Equity and Light-Duty Investments		
Clean Vehicle Rebate Project (CVRP)	$948.9	30%
Clean Cars 4 All	$102[c]	97%
Clean Mobility Options	$55.2	100%
Financing Assistance for Lower-Income Consumers	$33.9[c]	84%
Agricultural Worker Vanpools	$6	100%
Clean Mobility in Schools Pilot Project	$24.6	100%
Rural School Bus Pilot Project	$61.6	60%
Sustainable Transportation Equity Project (STEP)	$19.5	100%
Outreach, Education, and Awareness	$6[b]	100%
Heavy-Duty Vehicle and Off-Road Equipment Investments		
Advanced Technology Freight Demonstrations	$115	100%
Clean Off-Road Equipment Vouchers	$44.2	73%
Zero-Emission Truck/Bus Pilot	$85	78%
Zero- and Near Zero-Emission Freight Facilities	$148.7	100%
Clean Truck and Bus Vouchers (HVIP)	$486.4	63%
Total	**$2,131**	**56%**

[a] *Source: California Climate Investments 2021 Mid-Year Data Update.* *https://ww2.arb.ca.gov/sites/default/files/classic/cc/capandtrade/auctionproceeds/cci_2021mydu_cumulativeoutcomessummarytable.pdf*

[b] *Benefiting priority populations means providing direct, meaningful and assured benefits to individuals living in disadvantaged communities and low-income communities, or low-income households, as defined in AB 1550 and SB 535.*

[c] *Funding shown here only includes Low Carbon Transportation Allocations. Clean Cars 4 All received $3 million from AQIP and $10 million from the Volkswagen settlement funds. Financing Assistance for Lower-Income Consumers received $10 million from the Volkswagen settlement funds, and Access Clean California also received $5 million from the Volkswagen settlement funds.*

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 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 (Nunez, Chapter 750, Statutes of 2007). 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 CVRP, HVIP, and demonstrations for advanced emission reduction vehicle technologies. 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 to secure financing for newer trucks to meet 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
(FY 2008-2009 through FY 2020-21)

AQIP Project	Cumulative Project Allocations (millions)
Truck Loan Assistance Program	**$215**[1]
CVRP	**$146**[1,2]
HVIP	**$89**[1,2]
Clean Cars 4 All	**$4**[4]
Low NOx 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	**$482**
Air Quality Improvement Fund	$374
Other funding sources[1]	$108

Projects rounded to nearest $ million, except for projects allocated less than $2 million. Totals may not sum due to rounding.

[1] Includes a total of $108 million in funding from the California Energy Commission'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.

[2]CVRP and HVIP also received Low Carbon Transportation funds in FY 2013-14 through 2019-20.

[3]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 and Implementation

Several laws 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 disadvantaged and low-income communities. 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 Enhanced Fleet Modernization Program (EFMP) scrap and replace program (now known as Clean Cars 4 All) to increase access to clean vehicles for lower-income consumers and disadvantaged communities. Finally, SB 1275 requires CARB to include a long-term plan for CVRP and related light duty vehicle incentives. CARB included the long-term plan in the FY 2016-17 and FY 2019-20 Funding Plans and is including an updated Three-Year Plan for CVRP and the ZEV Market as Appendix C to this Funding Plan.

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 disadvantaged communities. Among other requirements, SB 1204 directs CARB to develop an annual framework and plan to guide these investments. Appendix B provides a detailed description of requirements of SB 1204 and how the investments proposed in this plan fulfill those requirements.

SB 1403 (Lara, Chapter 370, Statutes of 2018) modifies the direction from SB 1204, directing CARB, in consultation with the Energy Commission, to develop and include a three-year investment strategy for zero- and near zero-emission heavy-duty vehicles and equipment as part of the annual Low Carbon Transportation and AQIP Funding Plan. The strategy is to include a funding plan for the upcoming fiscal year and a forecast of estimated funding needs for the subsequent two fiscal years. 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. This year's funding plan includes an update to the Long-Term Heavy-Duty Investment Strategy (Appendix D) as well as an updated State School Bus Incentive Programs Report (Appendix E).

AB 2285 (Committee on Transportation, Chapter 100, Statutes of 2020) Extends the sunset date for a 20 percent set-aside of Greenhouse Gas Reduction Fund (GGRF) funding for heavy-duty truck technology to support early commercial deployment of existing zero- and near zero-emission heavy duty truck technology to December 31, 2021.

SB 350 (de León, Chapter 547, Statutes of 2015) directed CARB to conduct a study on the barriers for low-income and disadvantaged communities 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 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 Public Utilities Commission 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.

Funding Plan Development Process and Outreach

Staff held two public workshops, 18 public work group meetings, three targeted fleet focus groups, a community listening session, and numerous one-on-one discussions with interested stakeholders to develop recommendations included in this funding plan. Table 4 summarizes these public meetings.

Additionally, this year staff took initial steps to more meaningfully engage with communities and community advocates. In early January 2021, staff held the Project 800 Zero-Emission Truck Forum to address topics associated with large-scale zero-emission Class 8 truck deployments. The forum concluded with an evening community session to discuss priorities of local communities and advocates. As a part of project development, staff has also engaged with focus groups of advocates and small fleet operators to better tailor project design to serve the intended audience. Additionally, when considering funding allocations, staff reviewed the priorities highlighted by communities through other processes, such as AB 617, through internal coordination efforts and reviewing existing community emission reduction plans. CARB staff continues to collaborate internally with groups working on regulations, such as the Advanced Clean Cars and Advanced Clean Fleets rulemakings, and across the broader clean transportation incentives portfolio to hold joint community listening sessions and better understand community identified needs and solutions in expanding access to the zero-emission vehicle market. CARB staff considers these actions as initial steps and will continue to expand community outreach and engagement in developing future funding plans.

Table 4: Public Meetings on the Development of FY 2021-22 Funding Plan

Date	Meeting
3/30/2021	Fiscal Year 2021-22 Funding Plan for Clean Transportation Incentives Workshop #1
4/9/2021	Heavy-Duty and Off-Road Investments Work Group Kick-Off Meeting
4/9/2021	Clean Transportation Equity Investments Work Group Kick-Off Meeting
4/13/2021	Innovative Small e-Fleets Public Work Group Meeting
4/16/2021	CVRP Public Work Group Meeting #1
4/21/2021	Financing Assistance & Clean Cars 4 All Public Work Group Meeting #1
5/5/2021	Long-Term Heavy-Duty Investment Strategy Work Group Meeting #1
5/18/2021	Innovative Small e-Fleets Focus Group #1
5/26/2021	Innovative Small e-Fleets Focus Group #2
6/4/2021	Innovative Small e-Fleets Focus Group #3
6/14/2021	Clean Transportation Equity Projects Funding Allocations Work Group
6/17/2021	Financing Assistance and Clean Cars 4 All Work Group Meeting #2
6/17/2021	HVIP Work Group Meeting
6/29/2021	Increasing Access to Clean Transportation Community Listening Session
6/30/2021	Long-Term Heavy-Duty Investment Strategy Work Group Meeting #2
6/30/2021	CVRP Public Work Group Meeting #2
7/19/2021	Public Work Group for Clean Mobility Investments
7/27/2021	Public Work Group to Discuss Workforce Training and Development
7/28/2021	Long-Term Heavy-Duty Investment Strategy Work Group Meeting #3
8/4/2021	Fiscal Year 2021-22 Funding Plan for Clean Transportation Incentives Workshop #2
8/6/2021	Heavy-Duty Advanced Technology Demonstration & Pilot Projects Work Group
8/26/2021	CVRP Work Group Meeting #3
8/30/2021	Electric Bicycle Incentives Work Group Meeting #1
9/27/2021	Electric Bicycle Incentives Work Group Meeting #2

Chapter 2: Proposed Funding Allocations for FY 2021-22

The proposed FY 2021-22 Funding Plan includes a total of over $1.5 billion dollars, representing the first installment of the multi-year ZEV Acceleration Package, significantly expanding upon the investments in ZEVs and ZEV infrastructure the State has made over the past decade. These investments come at a critical time and are intended to spur the equitable deployment of zero-emission vehicles across the light- and heavy-duty sectors. The funds appropriated to CARB and discussed in this Funding Plan include:

- $838 million from the General Fund with $425 million to support CVRP, $98 million for clean trucks, buses & off-road equipment, $40 million for the drayage truck and infrastructure pilot, and $275 million to support deployment of 1,000 drayage trucks, 1,000 transit buses, and 1,000 school buses.
- $595 million for Low Carbon Transportation Investments with $100 million specified for CVRP, $150 million specified for clean transportation equity projects, $75 million of which is for Clean Cars 4 All, and $345 million specified for heavy-duty vehicle and off-road freight equipment.
- A one-time investment of $86.45 million from the Air Pollution Control Fund, originating from the Daimler and Fiat Chrysler Settlements, to support heavy-duty vehicle and off-road freight equipment.
- $28.64 million for the Air Quality Improvement Program (AQIP).

To help reach scale, the projects under consideration for the FY 2021-22 cycle in most cases continue and build on investments from previous budget cycles that were envisioned as multi-year investments. These include projects that aim to accelerate deployment of the cleanest feasible mobile source technologies and to improve access to clean vehicle purchasing incentives and clean mobility investments, including access to transportation options like transit and bicycling. The proposed investments also include targeted support to those communities most impacted by poor air quality.

Previous years' investments, 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, and the Legislature has directed a substantial portion of this year's funding to these programs. As technologies become more established and demand continues to grow, CARB is beginning to shift from broad purchase incentives to more targeted strategies that support the lower-income consumers and small fleets. CARB anticipates this shift will continue to accelerate in the coming years, helping to create an equitable transition to a clean transportation future.

Where the Legislature granted CARB discretion to allocate funds (i.e. within the CVRP, Clean Transportation Equity, and Heavy-Duty and Off-Road Equipment subcategories), staff determined proposed project allocations by evaluating anticipated demand, reviewing the long-term planning elements of previous funding plans, considering priorities identified by communities in CARB engagement efforts and documents such as community emission

reduction plans, assessing other available funding sources, and taking into account feedback from stakeholders.

Proposed Project Allocations

Staff's proposed project allocations are shown in Table 5. More information regarding each project and the rationale for these recommendations is included in Chapters 3 and 4.

Table 5: Proposed FY 2021-22 Project Allocations (Millions)

Project Category	Low Carbon Transportation	General Fund*	APCF	AQIP	Total Allocation
Vehicle Purchasing Incentives – CVRP	**$100**	**$425**			**$525**
CVRP	$100	$415			$515
Electric Bicycle Incentives		$10			$10
Clean Transportation Equity Investments	**$150**				**$150**
Clean Cars 4 All	$75				$75
Financing Assistance	$23.5				$23.5
Clean Mobility Options	$10				$10
Clean Mobility in Schools Pilot Project	$10				$10
Rural School Bus Pilot					$0**
Sustainable Transportation Equity Project (STEP)	$25				$25
Outreach, Community Needs Assessments, Technical Assistance, and the One-Stop-Shop	$5				$5
Workforce Training and Development	$1.5				$1.5
Heavy-Duty and Off-Road Equipment	**$345**	**$413**	**$86.45**	**$28.64**	**$873.09**
Clean Truck and Bus Vouchers (HVIP)	$196.5	$373			$569.5
Clean Off-Road Equipment Vouchers (CORE)	$108.5		$86.45		$194.95
Drayage Truck and Infrastructure Pilot		$40			$40
New Demonstration & Pilot Projects	$40				$40
Truck Loan Assistance Program				$28.64	$28.64
Total	**$595**	**$838**	**$86.45**	**$28.64**	**$1,548.09**

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

***After several years of successful implementation, the Rural School Bus Pilot Project is transitioning from a pilot to a full-scale project to be implemented through HVIP.*

CVRP

The budget includes $525 million for consumer rebates to reduce the price for new ZEV purchases through CVRP. These funds represent a substantial upfront investment as part of the ZEV Acceleration Package, intended to last three years, to address the recent increase in consumer demand since the January Budget proposal and support the earliest ZEV adopters. In line with legislative direction, staff proposes a ramp-down plan for CVRP based on cumulative electric vehicle sales that maintains inclusion of a standard rebate coupled with continued support for lower income ZEV purchasers. The plan includes modest adjustments over the next three years to the existing program criteria, setting the program up for a transition to an equity focus in future years.

Along with rebates for vehicles, $10 million will support rebates to reduce the purchase price for electric bicycles. The Electric Bicycle Incentives Project will provide "on-the-saddle" incentives for income qualified consumers for electric bicycles statewide. This new project will support low-income Californians access to clean mobility while helping to reduce VMT and help California achieve its climate goals.

Clean Transportation Equity Projects

The $150 million for clean transportation equity projects will help to 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 covers vehicle purchase incentives, clean mobility investments, outreach, community transportation needs assessments (needs assessments), technical assistance and capacity building, Access Clean California and workforce training and career development. In line with legislative direction, staff will direct $75 million of the clean transportation equity funds to Clean Cars 4 All. This year, staff proposes to use the funds to continue to support and expand existing projects, including expanding Clean Cars 4 All to San Diego, and also proposes to allocate funds to directly support workforce training and career development to build environmental literacy and strong pathways to green jobs. Additionally, staff proposes to transition the Rural School Bus Pilot Project from a pilot to a full-scale project to be implemented through HVIP.

Staff also proposes to continue to expand critical investments in transportation system and planning programs, which increase transportation and mobility choices and which can reduce VMT. Vehicle replacement programs, though of great importance, are best complemented by efforts to reduce vehicle dependence. As CARB has highlighted in multiple reports, including in response to SB 150, VMT has continued to increase, off-setting the benefits of cleaner vehicles. To meet California's climate goals, Californians will need to have appealing transportation options–including walking, biking, and public transit–that can replace vehicle trips. The Funding Plan programs responding to these needs include the Clean Mobility Options and Sustainable Transportation Equity Programs, providing valuable counterparts to the vehicle-focused programs.

Heavy-Duty Vehicle and Off-Road Equipment Investments

CARB will invest the $873 million for heavy-duty and off-road equipment following the principles of the portfolio approach. This means that CARB provides funding across multiple technologies at different points on their commercialization arcs to support those that are providing 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. Finally, the Truck Loan Assistance Program helps small business truckers to secure financing for newer trucks to meet compliance deadlines for CARB's in-use truck and bus regulation.

This year, funds will be set aside 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 be administered through HVIP. Additionally, staff proposes to introduce another new set-aside through HVIP called Innovative Small e-Fleets that will focus on overcoming challenges to zero-emission technology adoption for owner operators and small fleets. After its successful launch last year, staff proposes to allocate considerably more funding to CORE than the $25 million minimum specified by the Legislature. Staff also proposes to expand the eligible equipment within CORE. Consistent with the Legislature's appropriation in SB 170, CORE will include $30 million of dedicated funds to provide incentives for professional landscaping services in California operated by small businesses or sole proprietors to purchase zero-emission small off-road equipment. The Legislature also provided $40 million to CARB and $25 million to the California Energy Commission to fund all remaining eligible zero-emission drayage truck and infrastructure projects that were received during the recent joint solicitation.[18] Staff is proposing a set of off-road focused demonstrations this year to invest in technologies needed to support Governor Newsom's Executive Order N-79-20.

State Operations

Staff recommends that about one percent of the General Fund appropriation may be used for project administration by CARB. The appropriation to CARB for State Operations has been about $5 million per year; however, this amount has not increased, even as the total appropriation has grown. This year, the budget language included authorization to allocate up to five percent of the General Fund appropriation for administration.

Measures to Expedite Funding to Oversubscribed Projects

As many existing projects were oversubscribed and had not received funding for over a year, staff prioritized delivering funds to projects quickly so that the air quality and economic benefits of these projects can be realized. To do so, CARB acted on contingency provisions in the FY 2020-21 Funding Plan, Board Resolution 20-40, and the Executive Officer's

[18] https://www.energy.ca.gov/solicitations/2020-11/gfo-20-606-zero-emission-drayage-truck-and-infrastructure-pilot-project

authority to direct a portion of funds to projects that were either temporarily on hold, only accepting applications to waitlists, or in jeopardy of shutting down due to lack of funding.[19] On August 2, 2021, the Executive Officer notified Board members of his intent to direct a total of up to $262 million, or 17 percent of the total FY 2021-22 appropriation, to existing projects that were desperately in need of funding. This memorandum is included as Appendix I. Subsequently, CARB began directing funds to existing grantees for projects, as identified in Table 6. Additional details on these early allocations can be found in Chapters 3 and 4.

Table 6: Clean Transportation Projects that Received Early Allocations to Continue Operations

Project	Early Funding (millions)
Clean Vehicle Rebate Project (CVRP)	$99
Clean Cars 4 All	$25
Financing Assistance	$8
Zero-Emission Drayage Truck and Infrastructure Pilot	$40
Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP)	$60
Clean Off-Road Equipment Voucher Incentive Project (CORE)	$30
Total	**$262**

The total amount for each of these projects shown in Table 5: Proposed FY 2021-22 Allocations, and discussed throughout the remainder of this document, includes these early allocations.

Low-Income Community, Disadvantaged Community and Low-Income Household Investment Targets

A key component of these programs is providing health and economic benefits to California's most disadvantaged communities and low-income households. AB 1550 establishes low-income community, disadvantaged community, and low-income household targets for the State's Cap-and-Trade auction proceeds investments. Staff will focus outreach and engagement in low-income and disadvantaged communities to help increase these targets.

With this in mind, staff recommends that at least 60 percent of the Low Carbon Transportation appropriation be invested in projects meeting one of the AB 1550 criteria with the following targets:

[19] California Air Resources Board. *Proposed Fiscal Year 2020-21 Funding Plan for Clean Transportation Incentives.* November 2020. https://ww2.arb.ca.gov/sites/default/files/2020-11/proposed_fy2020-21_fundingplan.pdf

- At least 45 percent of funds for projects located within, and benefiting individuals living in, disadvantaged communities.
- At least 15 percent of funds for projects located within and benefiting low-income communities or benefiting low-income households.

This target represents a substantial increase over the 35 percent statutory minimum, and also represents an increase from the 50 percent target that was set in recent years. Staff considers the targets to be a floor and strives to exceed them. In designing project solicitations and implementation requirements, staff will consider whether there are provisions that can be incorporated to help ensure that CARB exceeds these minimum targets. CARB is expanding the disadvantaged community and low-income community/household focus beyond Low Carbon Transportation investments. Investments from AQIP, the General Fund, and the Air Pollution Control Fund are designed to benefit low-income and disadvantaged communities as well.

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 plan relies in part on future revenues generated at auctions in the upcoming fiscal year. To account for uncertainties in the proceeds that will be generated from Cap-and-Trade auctions, 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 2022. The 25 percent restriction applies individually to each of the three Low Carbon Transportation suballocations (CVRP, Clean Transportation Equity, and Heavy-Duty Vehicles and Off-Road Equipment). The impacts are most prominent in the Clean Transportation Equity category as the full $150 million is subject to this requirement, and the Legislature specified that $75 million of the appropriation be allocated to Clean Cars 4 All. Thus, $37.5 million in funding from the other Clean Transportation Equity 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 a manner that reduces project disruptions and maximizes immediate benefits to communities and will hold a workgroup in the winter with the proposed allocations for the Clean Transportation Equity projects.

Proposed General Fund Investments for Future Years

To support the transition of vehicle segments that are prime to make the transition to zero-emission, the State budget proposes multi-year investments from the General Fund to augment Low Carbon Transportation investments.[20] The proposed multi-year investments to CARB are shown in Table 7. While the multi-year proposal allows staff to plan and strategize investments, funds will only be allocated after the Legislature acts on the respective years' budgets. As a result, only the FY 2021-22 appropriation will be included in this year's funding plan.

[20] http://www.ebudget.ca.gov/2021-22/pdf/Enacted/BudgetSummary/ClimateChange.pdf

Table 7: Proposed Multi-Year Investments (Millions)

Program	FY 2021-22	FY 2022-23	FY 2023-24	Total
Drayage Trucks	$75	$75	$70	$220
Transit Buses	$70	$70	$60	$200
School Buses	$130	$135	$135	$400
Clean Cars 4 All	$75*	$125	$125	$325
Total	**$320**	**$405**	**$390**	**$1,145**

**The $75 million for Clean Cars 4 All in FY 2021-22 comes from the $150 million appropriated to Low Carbon Transportation Clean Transportation Equity Projects. All other funding shown in the table is from the General Fund.*

Note that unlike the investments shown in Table 7, the State budget included a larger upfront investment for CVRP rather than span investments across multiple budget years.

Drayage Trucks, Transit Buses, and School Buses: The State budget proposed a multi-year investment of $820 million to put 1,000 zero-emission drayage trucks, 1,000 zero-emission transit buses, and 1,000 zero-emission school buses on California roads over the course of the next three years. The proposed appropriations to CARB shown in the table above are complemented by funds appropriated to the CEC to support infrastructure development.

Clean Cars 4 All: The State budget proposed a total of $250 million for FY 2022-23 and FY 2023-24 to expand the Clean Cars 4 All program statewide. The proposed $250 million is in addition to the $75 million to Clean Cars 4 All that the Legislature specified should be allocated from the FY 2021-22 Low Carbon Transportation Clean Transportation Equity appropriation. Clean Cars 4 All provides funding to low-income Californians living in and near disadvantaged communities to scrap their old car and replace it with a new or used advanced technology car. This year staff will take the steps needed to plan and prepare for expansion statewide.

Chapter 3: Clean Transportation Equity & Light-Duty Investments

Overview

CARB's clean transportation equity 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 three complementary strategies: vehicle purchase incentives to reduce the purchase price; clean mobility investments; and outreach, technical assistance, needs assessments, workforce training and career development. Starting in 2009, CVRP laid the initial foundation for vehicle purchase incentives. Expanding on these initial investments, since FY 2014-15, CARB has allocated over $330 million to clean transportation equity pilot projects. Together, these 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 communities. Clean Cars 4 All and Financing Assistance are designed to increase access to cleaner vehicles in disadvantaged communities and lower-income households as prescribed by SB 1275 and supported by SB 350, as well as provide support to the secondary ZEV market. Each of these vehicle purchase incentives programs provide opportunities for all California residents to participate in vehicle purchase incentive programs as well as increase consumer awareness of clean vehicles in disadvantaged communities.

Clean Mobility Investments: Clean mobility investments support transportation needs of low-income residents and those living in low-income and disadvantaged communities. Transportation and mobility needs are not the same in all communities, so it is important to provide various options to be flexible and responsive to the community-identified needs. These projects provide funding for various clean mobility solutions (other than vehicle ownership) including zero-emission car sharing, vanpools, electric and regular bike sharing, ride-hailing, and other clean mobility options.

Outreach, Technical Assistance, Needs Assessments, and Workforce Development: Better understanding the transportation needs of low-income residents and disadvantaged communities, and increasing residents' awareness of clean transportation and mobility options are primary recommendations identified in CARB's SB 350 Guidance Document. Additionally, the Guidance Document identified the need to prioritize incentive projects that demonstrate local economic benefits through workforce development and job training opportunities. These projects and efforts focus on more meaningfully engaging with communities to understand transportation needs and gaps, tailoring outreach to increase awareness of funding programs, providing technical assistance to strengthen partnerships and funding accessibility,

creating streamlined applications for incentive funding, and expanding workforce training and career development opportunities.

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. These projects provide direct benefits to priority populations, such as reduced GHG, criteria pollutant, and toxics emissions, as well as other co-benefits.

A core focus across equity projects continues to be incorporating CARB's SB 350 Guidance Document equity principles and implementing recommendations in priority communities. The Guidance Document identifies several barriers to accessing clean transportation and mobility solutions, such as affordability, funding for clean transportation investments, and a lack of awareness of clean transportation options. The Guidance Document also identifies community-specific barriers, like 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 resources for priority populations who face disproportionate impacts.

This year, CARB will focus on developing metrics and creating a plan to measure the outcomes of clean transportation equity and light-duty vehicle projects. This includes evaluating how effective these projects are at generating behavioral changes and developing a plan to expand the metrics used to measure the socioeconomic benefits that result from these projects. This data will be used in the future to guide funding and design recommendations.

In addition, CARB is also considering how and where to incorporate The Greenlining Institute's Six Standards for Equitable Investment[21] and Equity Evaluation Methodology[22] when developing and analyzing clean transportation equity programs. The Equity Evaluation Methodology is comprised of Greenlining's Six Standards for Equitable Investment and Greenlining's Making Equity Real Framework.[23] This methodology, which can be adjusted to fit each community's specific needs, can be used to evaluate where programs are succeeding at incorporating equity and where they could be improved.

CARB's equity projects also support several complementary programs and strategies. 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 to share lessons

[21] The Greenlining Institute., *The Greenlined Economy Guidebook*. September 2020. https://greenlining.org/publications/2020/greenlined-economy/

[22] The Greenlining Institute., *Clean Mobility Equity: A Playbook – Lessons Learned from California's Clean Transportation Programs.* March 25, 2021. https://greenlining.org/publications/reports/2021/clean-mobility-transportation-equity-report/

[23] The Greenlining Institute. *Sustaining Clean Mobility Equity Programs.* March 31, 2021. https://greenlining.org/publications/reports/2021/sustaining-clean-mobility-equity/

learned, maximize the benefits of each project, and ensure these benefits are realized in priority communities.

Proposed Allocations for Clean Transportation Equity and Light-Duty Projects

The State budget provides substantial investments to support an equitable transition of passenger vehicles to zero-emission. The budget includes an upfront investment of $525 million from the General Fund and Low Carbon Transportation to support CVRP for the next three fiscal years. Additionally, the State budget includes $150 million for clean transportation equity projects, with $75 million of that earmarked for Clean Cars 4 All. In addition to this year's investments, the ZEV Acceleration Package envisioned additional appropriations in FY 2022-23 and FY 2023-24 totaling $250 million to expand Clean Cars 4 All statewide. Table 8 outlines the proposed FY 2021-22 allocations for CVRP and each equity project, considering current project demand and uptake, administrator capacity to spend funds, and funding that has already been allocated in past fiscal years 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.

CARB will continue to prioritize equity projects and work to balance the portfolio of clean transportation investments, including for vehicle purchase incentives, to allow for the most impacted communities with increasing burdens to have more immediate benefits as California transitions to a low carbon economy.

Table 8: FY 2021-22 Proposed Allocations for CVRP and Clean Transportation Equity Investments (millions)

Project Category	Total Allocations to Date*	Low Carbon Transportation Allocation	General Fund Allocation**	Total Allocation
Vehicle Purchasing Incentives – CVRP	**$1,086**	**$100**	**$425**	**$525**
CVRP	$1,086	$100	$415	$515
Electric Bicycles Incentives Project			$10	$10
Clean Transportation Equity Investments	**$337**	**$150**		**$150**
Clean Cars 4 All	$115	$75		$75
Financing Assistance	$44	$23.5		$23.5
Clean Mobility Options	$55	$10		$10
Clean Mobility in Schools Pilot Project	$25	$10		$10
Agricultural Workers Van Pool	$6	$0		$0
Rural School Bus Pilot	$62	$0		$0***
Sustainable Transportation Equity Project (STEP)	$20	$25		$25
Outreach, Community Needs Assessments, Technical Assistance, and the One-Stop-Shop	$11	$5		$5
Workforce Training and Development	$0	$1.5		$1.5
Total	**$1,424**	**$250**	**$425**	**$675**

**Funding shown here includes Low Carbon Transportation Allocations, Air Quality Improvement Program (AQIP) allocations, and Volkswagen 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 million from AQIP and $10 million from the Volkswagen settlement funds. Financing Assistance for Lower-Income Consumers received $10 million from the Volkswagen settlement funds, and Access Clean California also received $5 million from the Volkswagen settlement funds. Totals are rounded to the nearest million.*

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

**** After several years of successful implementation, the Rural School Bus Pilot Project is transitioning from a pilot to a full-scale project to be implemented through HVIP.*

Vehicle Purchase Incentives

Light-duty vehicle purchase incentives such as CVRP play an important role in increasing the number of ZEVs on California's roadways and achieving large-scale transformation of the fleet by reducing purchase price. Equity focused projects such as Clean Cars 4 All, the Financing Assistance programs and the increased CVRP rebates for lower-income applicants provide purchase incentives to increase ZEV adoption in low-income households.

Driven by SB 1275, SB 350, and AB 1550, the Clean Cars 4 All and Financing Assistance programs help increase access to cleaner vehicles for lower-income households in disadvantaged communities and support 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.

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. One such refinement includes aligning the definition of income and household across the various vehicle purchase incentives.

Additionally, 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 the Zero-Emission Assurance Project (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, CARB is unable implement ZAP at this time; however, staff will continue to do research and lay the groundwork to support this project in anticipation of a direct funding appropriation. Despite the challenges and barriers faced by lower-income consumers, demand from these programs indicate 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.

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.[24]

Summary of Changes to Long-Term Plans for ZEV Market

ZEV 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 low-income consumers and consumers in disadvantaged communities. 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 3-year funding need forecast along with a market and technology assessment. Staff also proposed a suite of indicators to measure ZEV market growth over time. Although SB 1275 required CARB to update the plan every 3 years, staff has provided updates to all components of the plan each year since. Next year, staff will include a more in-depth and comprehensive update to the plan.

As part of the Supplemental Report of the 2018-19 Budget Act[25], 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 ZEVs 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, this year's plan will include a schedule to phase down rebates based on cumulative sales over the next three fiscal years –FY 2021-22, FY 2022-23, and FY 2023-24 – while not impacting the low and moderate-income bonus. This plan must include rebate levels that continue to encourage early adoption of ZEVs, encourage a sustainable ZEV market, and support EV sales to reach the state's goal of 5 million ZEVs by 2030.

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[24] Executive Order N-79-20 https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf

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

Since the introduction of the first Light-Duty Long-Term Plan in FY 2016-17, the ZEV market has grown tremendously. However, events over the last 18 months have changed the ZEV market landscape and the new vehicle market as a whole. Despite the ongoing health and economic crisis, EV market share in California held steady at about 8 percent through 2020 and the beginnings of a market rebound were evident as the year came to a close. Recent EV sales data and project participation rates indicate that the rebound is continuing into 2021 and registration data through Q2 of 2021 shows that the EV market share grew to 10.7 percent.[26] It is too early to predict if the increase in EV purchases will continue into 2021, if an EV market share of 10.7 percent or higher will be sustained through the year, or how this will impact progress towards deployment goals. The inability to predict how the ZEV market will rebound continues to pose some challenges to updating funding need projections and the long-term plan. However, CARB is confident that under the direction of Governor Newsom's Executive Order N-79-20, CARB's pending proposal to greatly increase the stringency of its ZEV program, requiring 100 percent ZEV sales by 2035, will further stabilize the market. Staff is continuing to review new data as it becomes available and analyzing how the ZEV market rebounds in 2021 in order to update assumptions, evaluations, and recommendations for the long-term plan. However, staff believes that we could hit the first goal of 1 million vehicles as early as December of this year.

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 market growth in harder to reach market segments. After completing a thorough analysis of all market and technology aspects, staff have included updated findings and suggestions to support this goal in Appendix C of this Funding Plan, including the importance of upcoming changes to the Advanced Clean Cars Regulation.

[26] California Energy Commission (2021). California Energy Commission Zero Emission Vehicle and Infrastructure Statistics. Data last updated July 30, 2021. Retrieved August 7, 2021 from https://www.energy.ca.gov/zevstats

Clean Vehicle Rebate Project (CVRP)

Proposed General Fund Allocation–$425 million
Proposed Low Carbon Transportation Allocation–$100 million

Project Goals

CVRP offers vehicle rebates to eligible applicants on a first-come, first-served basis to reduce the purchase price for light-duty ZEVs, plug in hybrid electric vehicles (PHEVs), and zero-emission motorcycles. CVRP helps get the cleanest vehicles on the road in California by providing consumer rebates to partially offset the higher initial cost of these advanced technologies. Per-vehicle rebate amounts are based on consumers' income and vehicle technology as shown in Table 9. Increased rebates for low-income applicants were introduced in 2016.

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 9.
- Reducing the income cap to the levels shown in Table 9.
- Limiting plug-in hybrid electric vehicle 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) extends 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 the statutory requirement for some of the above-mentioned provisions sunset at the end of 2018, staff proposes to keep the following provisions in place for FY 2021-22:

- 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 Table 9.
- Provide increased rebates to eligible low-income applicants as shown in Table 9.
- Limit plug-in hybrid electric vehicle eligibility to those that meet the current electric range requirement.

Table 9: CVRP Rebate Amounts and Income Limits

Rebate Type	Fuel Cell Electric Vehicle	Battery Electric Vehicle	Plug-in Hybrid Electric Vehicle[27]	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 $150,000 Head-of-household tax filers whose income is greater than 400% of the federal poverty level but less than or equal to $204,000 Joint tax filers whose income is greater than 400% of federal poverty level but less than or equal to $300,000	$4,500	$2,000	$1,000	$750
Above Income Cap Individual tax filers whose income is greater than $150,000 Head-of-household tax filers whose income is greater than $204,000 Joint tax filers whose income is greater than $300,000	$4,500	Not eligible	Not eligible	Not eligible

[27] With an all-electric range of at least 30 miles as determined by U.S. EPA

Current Project Status

Through January 2021, CVRP has provided rebates for almost 420,000 vehicles totaling about $960 million since the project's launch in 2010. Since March 2016, almost 24,000 increased rebates have been issued to low-income consumers totaling over $97 million. About 64 percent of rebates issued went to battery electric vehicles (BEVs), 34 percent to PHEVs, and about 2 percent to fuel cell electric vehicles (FCEVs) and zero-emission motorcycles (ZEMs).

In December 2020, the Board approved a number of minor program adjustments to CVRP proposed in the FY 2020-21 Funding Plan. These changes were made to make implementation easier for CARB and our administrators and to allow for alignment with other Clean Transportation Equity Projects, such as Financing Assistance and Clean Cars 4 All. A detailed explanation of these changes can be found in the FY 2020-21 Funding Plan for Clean Transportation Incentives.[28]

The CVRP administrator, the Center for Sustainable Energy (CSE), implemented most of these changes on January 27, 2021 with the exception of the increase in PHEV all-electric range which was implemented on April 6, 2021. A majority of these changes were administrative in nature and have little to no impact on CVRP funding need. Implementing the change to PHEV all-electric range decreased the number of eligible PHEVs to four which reduced the number of rebate applications received for PHEVs. Additionally, since implementing the increase to the income limit for increased rebate eligibility, staff has noticed a marked increase in participation. Staff is continuing to monitor program data to better reflect the impact of these changes on future CVRP funding need. Additional project statistics are available on the CVRP website.[29]

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, roughly 50 percent of ZEVs purchased or leased in California have received a rebate. This suggests that the income cap is having its intended effect. Staff will continue to monitor these trends as the suite of program changes that went into effect in 2019 and the beginning of 2021 may impact the percentage of the ZEV market that receives a CVRP rebate.

Staff Proposal for FY 2021-22

As previously mentioned, the EV market started showing signs of a rebound toward the end of 2020 and some changes were made to CVRP in early 2021. Around the same time, staff recognized an increase in program participation overall with a more drastic increase in rebate applications for low- and moderate-income increased rebates as eligibility was expanded.

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[28] Proposed Fiscal Year 2020-21 Funding Plan for Clean Transportation Incentives, Approved at the December 10, 2020 CARB Board Meeting, https://ww2.arb.ca.gov/sites/default/files/2020-11/proposed_fy2020-21_fundingplan.pdf.

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

Additional factors for this increase could include pent up demand from 2020, the launch of the statewide Clean Fuel Reward point of sale incentive, or an increase of targeted outreach at the state and local level and by manufacturers.

Due to the increase in participation in early 2021, it became evident that the remaining FY 2019-20 funding for CVRP would be exhausted by the end of April 2021. Staff initially expected this funding to last further into the year especially for increased rebates. CARB issued a press release on April 14, 2021 and held a public work group on April 16, 2020 to signal the impending end of current funding and to announce that a waitlist would be held this year. The CVRP administrator officially notified applicants of the impending waitlist on April 23, 2021. Remaining buffer funding allowed CVRP to fund applications that were received through May 18, 2021. All applications for both standard and increased rebates received on or after May 19, 2021 were officially on the waitlist until September 15, 2021 when new funding was added to the program.

The Budget Act of 2021, signed into law on July 12, 2021, included a substantial upfront allocation of $525 million for CVRP from both the General Fund ($425 million) and the Greenhouse Gas Reduction Fund ($100 million). This allocation is expected to fund the program for Fiscal Years 2021-22, 2022-23, and 2023-24. Additionally, $10 million of this allocation will be used to establish the Electric Bicycles Incentive Project. Staff will implement this program separately from CVRP and will work with stakeholders through the public process to develop the program. Additional details on the Electric Bicycle Incentives Project can be found in this year's funding plan on page 52.

In line with the contingency provisions approved by the Board in the FY 2020-21 Funding Plan, staff is using a portion of the FY 2021-22 allocation to fully fund the waitlist that began on May 19, 2021. Since the CVRP allocation comes as its own line item in the budget, staff began the process of adding a portion of these funds into the current grant as soon as the budget was approved and expects to have the funds under grant prior to the Board Meeting. This will allow the program administrator to start processing applications and issuing rebates to those on the waitlist while CARB staff finalizes a proposal for the remainder of the funding. Additionally, a portion of the FY 2021-22 allocation will be used to fund rebates under the current program terms until staff's proposal is heard before the Board in November 2021 and changes are implemented in February 2022. Staff worked with stakeholders through the public process to determine which program adjustments were needed over the next few years based on projected demand and remaining funds expected after the waitlist is funded. Staff's proposal for the remainder of the allocation and a three-year plan for ramping down the program is included in this section and in Appendix C of this Funding Plan.

CVRP Demand Projections: In early June 2021, staff worked with CSE to release updated preliminary projections that included EV sales and program data through Q1 2021.[30] Staff has modeled projections for both standard and increased rebate funding need.

[30] Center for Sustainable Energy, Preliminary 2021–2023 CVRP Projections: Update 2, Released June 4, 2021. https://cleanvehiclerebate.org/eng/content/preliminary-2021%E2%80%932023-cvrp-projections-update-2

The methodology is very similar to previous years, however, this year CSE is 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, increasing the income threshold for increased rebates to 400 percent of the federal poverty level, and the increase in the minimum PHEV all-electric range requirement. 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 and assumes that state and federal incentives remain constant.

As previously mentioned, funding for standard and increased rebates ran out in mid-May 2021. Table 10 shows the anticipated backlog of demand ("waiting list") of about 25,000 rebates totaling about $45 million between May 19, 2021 and when the FY 2021-22 funding could be added to the program in September 2021. Table 11 shows estimated rebate demand for the remainder of the FY 2021-22 funding cycle through the end of FY 2023-24, which goes from October 2021 through June 2024, and the corresponding funding need, with projections for both standard rebates and low-income increased rebates. These projections assume no changes to the current program design. In previous years, staff has shown these values as a range of low, middle, and high. For the purposes of program analysis, staff uses the middle value. Detailed analysis of CVRP funding need over the next three fiscal years is included in Appendix C of this Funding Plan.

Table 10: Projected FY 2020-21 Waitlist Demand

Time Period	Standard Rebates Waitlist Demand	Increased Rebates Waitlist Demand	Total Waitlist Demand
May 19, 2021-September 30, 2021 (4.5 months)	$27 million ~13,000 rebates	$18 million ~4,000 rebates	$45 million ~17,000 rebates

Table 11: Projected Rebate Demand for FY 2021-22 Through FY 2023-24 (with no program changes)

Time Period	Standard Rebates	Increased Rebates	All Rebates
October 1, 2021-June 30, 2024 (33 months)	$322 million ~152,000 rebates	$285 million ~62,000 rebates	$607 million ~214,000 rebates

Based on current projections, a total funding need of over $650 million is required to meet demand for the program through the FY 2023-24 funding cycle under the current program design. As such, the current FY 2021-22 CVRP allocation of $515 million is not sufficient to operate the program through FY 2023-24 unless changes are implemented. Staff will continue to work with the program administrator to update projections as additional data becomes available. In the event that the increased rebate demand trends higher than projected, staff would set aside necessary funds to ensure that remaining funding would be sufficient to support increased rebates through as much of FY 2023-24 as possible.

Proposed Changes to Project Criteria

In line with the requirements of the Budget Act of 2021, staff worked with stakeholders to determine which changes should be made to CVRP over the course of the next three fiscal years in order to ramp down the incentive while still offering critical support to the ZEV market. As mentioned earlier, a three-year funding need of over $650 million is needed to operate the program through FY 2023-24 as it is currently designed. As this amount exceeds the available $515 million allocation for CVRP over this time period, staff is proposing a series of phased-in program changes triggered by reaching various EV sales goals. Staff will coordinate with the CEC and refer to CEC's Zero-Emission Vehicle and Infrastructure Statistics webpage[31] to determine when those goals are met. This plan includes changes that staff believes are in line with the Governor's intent to focus this funding on middle- and lower-income consumers as well as changes that respond to concerns previously outlined by the Legislature and various environmental justice groups. A detailed analysis of the impact of the proposed changes to project criteria, including alternatives considered, is included in Appendix C of this Funding Plan.

Phase One Changes: 1 Million EVs Sold in California

Staff is proposing the following changes to be implemented once 1 million EVs have been sold in California. Staff anticipates that California will reach the first ZEV deployment goal of 1 million EVs sold by the end of 2021. In order to provide ample time to notify dealers, consumers, and outreach partners of upcoming changes triggered by reaching this EV sales goal, staff is proposing that changes will not be effective until February 2022 at the earliest.

- **First decrease to income cap for standard rebate eligibility:** Staff is proposing to decrease the existing income caps for standard rebate eligibility that have been in place since November 2016. This change is intended to focus available funding on middle and lower-income EV buyers without impacting the low- and moderate-income bonus. For single filers, the current $150,000 gross annual income cap to be eligible for the standard rebate would be reduced to $135,000. For head-of-household filers, the current $204,000 cap would be reduced to $175,000. For joint filers the current $300,000 cap would be reduced to $200,000. Staff set income caps based on numbers

[31] California Energy Commission (2021). California Energy Commission Zero Emission Vehicle and Infrastructure Statistics. Data last updated July 30, 2021. Retrieved August 7, 2021 from https://www.energy.ca.gov/zevstats

previously proposed by the Legislature and members of Charge Ahead California. Specifically, staff began with the numbers suggested in a version of AB 126 (Cooper, 2019) and modified the numbers to allow for a step down approach, particularly for the limit associated with individuals. The limits recommended in the first and second decrease (below) are intended to serve as a compromise between the existing levels and levels as low as 700 percent FPL, suggested by various equity stakeholders.

- **Bifurcate model minimum MSRP cap requirement; Reduce MSRP cap to $45,000 for smaller vehicle classes:** In the FY 2020-21 Funding Plan, the Board approved staff's proposal of a framework to bifurcate eligible vehicles into "Cars" and "Large Vehicles" based on EPA vehicle class. The Large Vehicles category includes minivans, pickups, and SUVs, while the Cars category includes all other light-duty vehicle classes (e.g., hatchbacks, sedans, wagons, two-seaters). Staff is proposing a reduction in the current MSRP cap of $60,000 to $45,000 for all vehicles that fall under the Cars category. This would exclude the BMW i3 REx (which has been phased out by BMW), and the Polestar 2. The proposed 25 percent reduction in the MSRP cap for cars is appropriate given the broader range of vehicles available in this class, their range options, and price points. This modest reduction would allow CVRP to continue to support the growing ZEV market, while placing an emphasis on more economical options. This change would not impact vehicles that fall under the Large Vehicle category as they would retain a $60,000 model minimum MSRP cap. As stated in previous updates to the long-term plan for light-duty vehicles, staff is making a change to this program lever to ensure that funding is not going to luxury vehicles and to encourage vehicle manufacturers to produce more affordable EVs.

Phase Two Changes: 1.25 Million EVs Sold in California

Staff is proposing the following program changes to be implemented once 1.25 million EVs have been sold in California. Staff estimates that California will reach this sales goal by the end of 2022 or in early 2023. In order to provide ample time to notify dealers, consumers, and outreach partners of the upcoming changes triggered by reaching this EV sales goal, staff is proposing that changes will not be effective until February 2023.

- **Second decrease to income cap for standard rebate eligibility:** Staff is proposing a second decrease to the income caps for standard rebate eligibility based on the levels set in February 2022. This change would further focus remaining funding for rebates on middle and lower-income EV buyers without impacting the low- and moderate-income bonus. For single filers, the gross annual income cap to be eligible for the standard rebate would be reduced to $120,000. For head-of-household filers, the cap would be reduced to $160,000. For joint filers the cap would be reduced to $185,000. Staff set income caps based on numbers previously proposed by the Legislature and members of Charge Ahead California.

- **Remove PHEVs from program eligibility:** Staff is proposing an elimination of PHEVs from CVRP eligibility during this phase of program changes. This change would exclude the currently eligible Chrysler Pacifica PHEV, Honda Clarity PHEV, Ford

Escape PHEV, and Toyota RAV4 Prime. Possible future impacted vehicles might include the Hyundai Santa Fe PHEV, the Kia Sorrento PHEV, and the Hyundai Tucson PHEV. Based on recent program data, there has been a shift toward an increase in rebate applications for battery electric vehicles. This change would focus remaining funding on the cleanest vehicles available and provide continued support toward a sustainable ZEV market.

- **Reduce rebate amounts by $250:** Staff is proposing to reduce both standard and increased rebate amounts by $250. This change allows for a moderate ramp down of the standard rebate while retaining a $2,500 bonus for low- and moderate-income applicants. Table 10 shows current and proposed rebate amounts for BEVs, FCEVs, and ZEMs. Note that PHEV rebate amounts are not shown in this table as staff is proposing an elimination of PHEVs from eligibility during this phase of changes.

Table 10: Current and Proposed Rebate Amounts

Rebate Type	Current Rebate Amounts	Proposed Rebate Amounts (Eff. Feb. 2023)
Standard Rebates	BEV: $2,000 FCEV: $4,500 ZEM: $750	BEV: $1,500 FCEV: $4,250 ZEM: $500
Increased Rebates	BEV: $4,500 FCEV: $7,000 ZEM: N/A	BEV: $4,250 FCEV: $6,750 ZEM: N/A

Plan Contingencies

Staff analyzed the impact of reverting to an income threshold of 300 percent of the Federal Poverty Level for increased rebate eligibility. While this change does result in a moderate budget savings, staff is not including it in this three-year plan of phased in changes. One of the main reasons this change was excluded is because it would take CVRP increased rebate eligibility out of alignment with our other vehicle purchase incentive programs – Clean Cars 4 All and Financing Assistance – and complicate stacking opportunities for income-qualified applicants. As such, staff proposes to leave the income threshold for the increased rebate at 400 percent until a reduction is appropriate for all three purchase incentive programs.

Additionally, as we've seen over the last few years, the ZEV market is very reactive to disruptive events such as the ongoing health and economic crisis, releases of popular EV models, and manufacturing and delivery delays. Because of this, staff will continuously monitor market and program data and will reevaluate ongoing funding need. Based on

analysis, if certain program changes should be implemented sooner, be delayed, or eliminated from this three-year plan, staff would use the workgroup process to deliberate adjustments and propose necessary changes in a future funding plan. Staff will also provide updates on implementation of this plan in future funding plans.

Impact of Proposed Changes to Three-Year Funding Need

In order to further progress toward meeting our ZEV deployment and equity goals, staff's proposed ramp down plan aims to focus on adjusting current program criteria in a way that minimizes confusion and disruption to the program. In an effort to understand how these proposed changes would impact the program budget, staff analyzed the impact each change would have on the program and the overall funding need through FY 2023-24, in coordination with the CVRP administrator. Reducing the income cap would have a moderate to large impact on the budget, projected rebates, and EV sales. A reduction in the MSRP cap for vehicles that fall under the Cars category would yield small budget savings, with a small number of projected rebates excluded from the program. The release of future affected vehicles may increase the impact of this program change. Removal of PHEVs from eligibility is expected to have a larger budget impact but it is unknown what percentage of car shoppers might choose a BEV once PHEVs are no longer eligible for CVRP. A rebate reduction of $250, applied to all rebate types, would likely have a moderate impact on the budget, and a small impact on rebate demand and EV sales estimates.

The combination of these program changes is expected to yield a savings of about $146 million over the course of the next three fiscal years. This would reduce overall funding need from over $650 million to approximately $505 million through FY 2023-24. Staff will continue to analyze program and market data as these changes are implemented and will report back on the actual impact to the program and ZEV market overall in future funding plans

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 proposed 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.

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 this year. CARB staff will re-evaluate the need for a new solicitation next year and, if needed, will hold the solicitation at a time that is as minimally disruptive to the program as possible.

Project Evaluation and Outcomes

Although no specific set aside for increased rebates for low-income consumers was mentioned in the Budget Act of 2021, staff estimates 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. This estimate is based on the changes proposed over the next few years that aim to narrow the program's focus to middle- and lower-income EV buyers. With this framing, staff estimates that $257.5 million of the total allocation will be used for standard rebates which would fund about 130,500 rebates and provide over 1.04 million metric tons of carbon dioxide (CO2) equivalent GHG emission reductions. The funding would also provide about 68 tons of NOx, 45 tons of fine particulate matter (PM 2.5), and 13 tons of reactive organic gas (ROG) emission reductions.

Staff estimates 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 ZEV market is continuing to grow dynamically. Although it is still early in the ZEV market's development, there is a clear need to evaluate the effectiveness of investments toward CVRP and other light-duty vehicle incentives. Staff provided an update to the long-term plan for the Three-Year Plan for CVRP, the ZEV Market, Clean Transportation Equity Investments, and Outreach in Appendix C of this funding plan. This includes a review of market and technology indicators and a determination of if and when additional changes need to be made to CVRP. These indicators include, but are not limited to: ZEV 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 ZEVs; growth of the used ZEV market; and consumer awareness about ZEVs.

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 ZEVs 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 the FY 2018-19 Funding Plan. An updated report is provided in this funding plan as part of Appendix C and will be updated in the funding plan annually thereafter until 2030.

Staff is developing a 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 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 work with stakeholders to identify goal markers for each of these metrics, and ensure the metrics are in response 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. Staff will work with stakeholders through the public process starting in late-2021 and into 2022 and a more in-depth analysis will be included in next year's funding plan.

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 December 1, 2019 through November 30, 2020, about 11 percent of CVRP funding went to applicants in disadvantaged communities, and 29 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 40 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). 21 percent of CVRP 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, 40 percent of CVRP funding is now benefitting priority populations.[32] Further details are available on the CVRP website's rebate

[32] California Air Resources Board. *California Climate Investments: 2020 Annual Report*. p. 50 April 2021. https://ww2.arb.ca.gov/sites/default/files/classic/cc/capandtrade/auctionproceeds/2021_cci_annual_report.pdf

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 fiscal years should increase with the changes to increase the equity-focused components of CVRP. These include continued higher rebates for low-income consumers, a reduction in the income cap for standard rebate eligibility, 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.

Electric Bicycle Incentives Project

Proposed General Fund Allocation
$10 million

Project Goals

The Electric Bicycle Incentives Project is a new project that aims to provide "on-the-saddle" rebates to reduce the purchase price for electric bicycles (e-bikes) to income qualified consumers. The pilot will be designed to help Californians reduce their VMT by lowering barriers to e-bike ownership, as well as learn about bicycle safety and support local businesses.

The Electric Bicycle Incentives Project will pilot an approach that aims to 1) help people replace car trips with e-bike trips, 2) increase access to electric bicycles, and 3) reduce GHG emissions.

Current Project Status

The Electric Bicycle Incentives Project is currently under development. Staff anticipates having a project administrator in place by mid-to-late 2022. Solicitation, policy, and implementation public work groups will be held throughout the rest of 2021 and will continue throughout 2022.

Staff Proposal for FY 2021-22

Consistent with the goals of SB 375, the Electric Bicycle Incentives Project would increase access to clean transportation options while offsetting VMT by way of incentivizing e-bikes. A portion of project funds would support the development and administration of a virtual bicycle safety class, so that consumers understand bicycle road safety. Staff proposes to vary rebate amounts for new e-bikes depending on the e-bike type and/or an individual's income. Rebates would be "on-the-saddle", meaning that the rebate would be applied to the e-bike purchase at the point of sale and the retailer would request the funds from the program administrator.

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.

Solicitation: CARB will select a grantee to administer FY 2021-22 Electric Bicycle Incentives Project funds via a competitive solicitation and will retain the option to award additional

funds from FY 2022-23 and FY 2023-24 to the selected grantee under the same terms and conditions. Staff expects to release a solicitation in of the first quarter of 2022 and have a grant in place for the FY 2021-22 funds by mid-to-late 2022.

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 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. In program development, staff will examine the feasibility of making eligibility for this rebate entirely low-income.

Clean Cars 4 All

Proposed Low Carbon Transportation Allocation
$75 million

Project Goals

Clean Cars 4 All (formerly known as the Enhanced Fleet Modernization Program (EFMP) Plus-up Pilot Project) provides incentives to help lower-income consumers living in and near disadvantaged communities replace their old higher-polluting vehicles with newer and cleaner transportation by reducing the purchase price. Options include the purchase of new or used hybrid, plug-in hybrid, or ZEV replacement vehicles. Furthermore, participants can choose an alternative mobility option such as an electric bike, a voucher for public transit, or a combination of clean transportation options allowed under the program in lieu of purchasing a replacement vehicle. In addition, buyers of plug-in hybrid and battery electric vehicles are also eligible for home charger incentives or prepaid charge cards if home charger installation is not an option. Participants must have a household income of less than 400 percent of the federal poverty limit and live in a ZIP Code containing a disadvantaged community census tract.

Clean Cars 4 All and the scrap-only component of EFMP use participation rates as one measure of success in reaching FY 2021-22 annual goals. These annual goals are established through a public process. In addition to monitoring overall participation rates, the number of vehicles funded by replacement vehicle technology type, number of participants choosing the alternative mobility option, and number of EVSE or prepaid vehicle charge card incentives are also tracked.

CARB staff determines proposed district funding allocations based on Quarterly Report data from the participating air districts. Quarterly reports provide information including fund balances and the rate of expenditure which CARB uses to determine which districts have the greatest need of additional project funds. CARB staff also considers what is needed to get new projects up and running, and the unique models of each District's program when determining funding allocations. Due to the atypical circumstances of this past year that adversely affected program funding and performance, CARB staff has also taken additional steps in coordinating and meeting directly with districts to gain additional information. These meetings were opportunities for the districts to present additional metrics such as total applications and application processing capability, total program capacity, and any other metrics that would help illustrate each program’s capabilities, demand, and difficulties. This information from the districts was also incorporated into the allocation determination. In response to the California Auditor’s report on CARB incentive programs, CARB will also develop metrics to gauge the socioeconomic benefit of the improved reliability of the replacement vehicle over the retired vehicle.

Current Project Status

Since FY 2014-15 and through the first quarter of 2021, CARB has allocated $115.6 million for Clean Cars 4 All, including $102 million of Low Carbon Transportation funding, $10 million of Volkswagen settlement funding, and $3.6 million of AQIP funding. South Coast Air Quality Management District (AQMD) has received $61 million while San Joaquin Valley Air Pollution Control District (APCD) received $28.6 million. The Bay Area AQMD and Sacramento Metropolitan AQMD have more recently launched Clean Cars 4 All programs and have been allocated $17 million and $9 million respectively.

The Clean Cars 4 All Program launched in July 2015 in South Coast AQMD and San Joaquin Valley APCD. To date, South Coast AQMD has expended approximately $58 million to replace 6,762 vehicles. Of the replacement vehicles purchased, 10 percent were battery electric vehicles BEVs, 58 percent were plug-in hybrid electric vehicles PHEVs, and 31 percent were conventional hybrid vehicles. Additionally, 16 FCEV replacements and seven alternative mobility options were utilized by participants. 18 in-home EVSE infrastructure installation incentives were utilized by participants. [33]

San Joaquin Valley APCD has expended approximately $25 million to replace 3,188 vehicles. Of the replacement vehicles purchased, 10 percent were BEVs, 50 percent were PHEVs, and 40 percent were conventional hybrids. No FCEV or alternative mobility options were utilized by participants. One in-home EVSE infrastructure installation incentive was utilized by a participant.

Bay Area AQMD launched their Clean Cars 4 All program in September 2019 and has since expended approximately $12 million to replace 1,293 vehicles and fund 117 electric vehicle service equipment (EVSE) installations. Of the replacement vehicles purchased, 22 percent were BEVs, 49 percent were PHEVs, and 27 percent were conventional hybrid vehicles. Additionally, 1 percent was FCEV replacements and 1 percent total was mobility options and electric bicycles (e-bikes). 117 in-home EVSE infrastructure installation or pre-paid vehicle charging card incentives were utilized by participants.

Sacramento Metropolitan AQMD launched their Clean Cars 4 All program in July 2020 and has expended approximately $2.4 million to replace 163 vehicles. Of the replacement vehicles, 28 percent were BEVs, and 72 percent were PHEVs. No FCEV or alternative mobility options were utilized by participants. No in-home EVSE infrastructure incentives were utilized by participants.

San Diego APCD is working with CARB staff to implement Clean Cars 4 All in the San Diego air basin with FY 2021-22 funding.

The South Coast AQMD, San Joaquin Valley APCD, and Bay Area AQMD Clean Cars 4 All programs are expected to have exhausted their funding by the time of this report's

[33] These figures reflect vehicles funded only with Low Carbon Transportation funding allocated in previous Funding Plans.

publication. Sacramento Metropolitan AQMD is expected to exhaust their funds in the summer of 2022.

In the Budget Act of 2021 (Skinner, Chapter 69, Statutes of 2021) the Legislature directed that $75 million be allocated to Clean Cars 4 All, staff began the process of adding a portion of these funds based on district needs into existing programs after the budget was approved and ahead of the Board Meeting as authorized by the contingency provisions in the FY 2020-21 Funding Plan. Specifically, as described in Chapter 4, the Executive Officer directed $25 million of the FY 2021-22 allocation to Clean Cars 4 All as an early allocation. The purpose of the contingency funds is to ensure the district programs in most immediate need of funding can remain open and continue processing applications. Historically South Coast AQMD has received the majority of annual funds and consistently demonstrated high fund expenditure rates whereas San Joaquin Valley APCD and Bay Area AQMD have received approximately equivalent annual funding and fund expenditure to each other. As such, currently all three district programs have been closed to new applicants at different times due to the lack of recent funding. The $25 million in contingency funds will be split into 3 equal payments of $8.3 million and allocated to these three air districts in most immediate need of funding. This will allow these districts to continue processing applications and issuing grants while CARB staff finalizes a proposal for the remainder of the funding. Staff will direct the remaining $50 million to Clean Cars 4 All, following Board approval of the proposed $75 million allocation. Details of the total $75 million allocation for FY 2021-22 including the $25 million of contingency funds can be found in Table 12 below.

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 instituted various tools such as virtual inspections. When additional funding is available, districts plan to increase targeted outreach to overburdened communities. Staff also anticipates that the Access Clean California and Financing Assistance programs will further increase participation and streamline the application process.

Regulatory Changes for Statewide Expansion

In response to stakeholder input and legislative interest and through a separate public process, CARB has identified and is taking some of the necessary steps to enable statewide expansion of the Clean Cars 4 All program. CARB staff, alongside the Funding Plan process, proposes changes to the Clean Cars 4 All program regulations, as adopted in the California Code of Regulations (CCR), title 13, division 3, chapter 13, sections 2630 through 2639, that will enable future statewide expansion, and allow the program the flexibility to respond to changing market conditions and participant needs. Once these proposed changes are processed and filed with the Office of Administrative Law, the Executive Officer may initiate the public processes so that CARB staff may gather stakeholder input prior to implementing these changes in the Clean Cars 4 All Program. The proposed updates include:

Removing the population requirement for air district eligibility and changing all instances of the term "district" to "district or third-party administrator" when referencing program administration. These updates would enable all air districts to potentially participate in the Clean Cars 4 All program. Additionally, these updates would allow CARB to potentially solicit bids from third-party organizations to administer additional Clean Cars 4 All programs for districts that may lack the necessary administrative resources, or otherwise choose not to directly participate in the Clean Cars 4 All program. These updates alone would not expand the Clean Cars 4 All program beyond the current participating air districts. These updates also would not affect the current participating air districts' ability to continue implementing their current programs.

Adding flexibility for districts to choose replacement vehicle technology options. Current program regulations require all participating air districts to offer conventional hybrids, plug-in hybrids, and zero-emission vehicle technologies as eligible replacement options to all participants. An additional update to the program regulations would allow CARB to consider a participating air district's plans to limit eligible replacements to the cleanest technologies. This update would not remove eligible vehicle technologies from the program altogether but would provide CARB the flexibility to approve district plans to limit eligible vehicle replacement technologies provided the district has vetted those plans through its own public process.

Adding flexibility for districts to lower income eligibility. CARB has received stakeholder comments suggesting limitation of the program to participants below the 300 percent Federal Poverty Level (FPL) threshold. Currently, at least 90 percent of program funds are already directed towards participants below the 300 percent FPL threshold. Furthermore, the program's expansion to statewide will bring in additional stakeholders who have not yet had the opportunity to provide their perspective on such a limitation. Therefore, staff recommends no changes to the program income eligibility requirements at this time. Instead, the program regulation will be updated to allow CARB to consider a participating air district's plans to limit income eligibility. This update would not limit income eligibility in the program immediately but would provide CARB the flexibility to approve district plans that limit income eligibility and focus funding to the lowest income thresholds and provide CARB the ability to institute such limits program wide through a public process if it is later determined to be appropriate.

Increasing incentives for lowest-income thresholds. CARB has also received comments regarding increasing incentives for the low-income participants to compensate for recent vehicle price increases across the entire vehicle market. According to district program data, this does not appear to be a significant barrier to participation as the district Clean Cars 4 All programs remain oversubscribed. Additionally, over 88 percent of funds in Q1 and Q2 of 2021 have been directed towards low-income households at or below the 225 percent Federal Poverty Level threshold. However, to increase program flexibility and responsiveness to changing market conditions for the lowest-income participants, staff does propose additional EO authority to make incentive amount changes if needed in advance of next year's funding plan.

Increasing incentives for adaptive equipment. Additionally, Sacramento Metro AQMD recommended that Clean Cars 4 All offer increased incentives for participants who require vehicles with adaptive equipment due to physical disabilities. CARB staff will continue to work with districts and stakeholders to learn more about the types of equipment, costs, and barriers that they cause to program participation. Increasing incentive amounts now would result in fewer incentives being available, thus potentially reducing overall program participation. Therefore, staff do not propose making changes to incentive levels at this time. However, to increase program flexibility and responsiveness to participant needs, staff does propose additional EO authority to make incentive amount changes if needed in advance of next year's funding plan.

Executive Officer Authority for Program Changes

CARB staff requests the Board delegate authority to the Executive Officer to make changes to the Clean Cars 4 All program including statewide expansion, modifying eligible technology types, and household income eligibility to allow full implementation of the updated regulations, following the conclusion of the public process and filing with the Office of Administrative Law. CARB staff also requests the Board delegate authority to the Executive Officer to make changes to the Clean Cars 4 All portion of the FY 2021-22 Funding Plan, including modifying incentive amounts and district allocations. These changes, following a public process to gather district and stakeholder input, are expected to be completed before Board approval of next year's Funding Plan, and so is necessary to avoid potential delays in implementing the regulatory updates.

Additional Program Changes

In advance of statewide expansion, CARB staff plans to pursue additional program improvements once the described regulatory changes are filed and effective. One such improvement is to continue work with districts, stakeholders, and dealerships to develop and document consistent expectations, consumer protections, and requirements for participating dealerships. These standards will be developed through a public process to encourage stakeholder input. Once finalized, they will be incorporated as part of the requirements listed in the solicitation for a statewide program administrator. This will ensure participants in expanded program areas will receive a similar dealership experience, benefits, and protections when working with approved dealerships.

Another improvement staff will pursue is further deployment of prepaid vehicle charge cards in lieu of home EVSE installations where deemed appropriate and possible. This includes examining efforts currently underway at participating districts and identifying potential industry and community partners for implementation. Prepaid charge cards will help maximize the benefits of PHEV and BEVs for participants that cannot install in-home electric vehicle supply equipment (EVSE).

Additional general program improvements are also planned, especially to address program issues that were highlighted by recent participant surveys. Such highlighted issues that CARB and the districts will work on include efforts to further promote the adoption of mobility options as an alternative to vehicle replacements and the availability of EVSE/charge card

incentives for BEV and PHEV replacements. Measures under consideration by CARB staff to address these items include updating district program implementation manuals to include specific details and/or plans to promote mobility options and EVSE/charge card availability. 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 solicitations.

In response to stakeholder 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, staff plans to work with the districts and explore options to achieve consensus on this issue, including but not limited to potential grant amendments.

To provide additional benefit to participants, staff is currently amending future 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.

Staff Proposal for FY 2021-22

CARB works with participating districts to determine funding allocations through a collaborative and public process. CARB analyzes past performance data alongside data, metrics, and other details provided by the districts to forecast program demand and related funding needs. Given this year's appropriation and legislative direction, staff recommends allocating $75 million to Clean Cars 4 All for FY 2021-22. With an allocation of $75 million, staff expects to distribute funding to participating air districts as presented in Table 12 below. Staff recommends a $5 million allocation to San Diego APCD to launch their local program. Staff recommends that $10 million be allocated for strategic reserve. The strategic reserve may be allocated to any participating air district based on program demand.

Table 12: Proposed FY 2021-22 Clean Cars 4 All Allocations to Air Districts

Project	FY 2021-22 Funding (millions)
South Coast AQMD	$28*
San Joaquin Valley APCD	$15*
Bay Area AQMD	$15*
Sacramento AQMD	$2
San Diego APCD	$5
Strategic Reserve	$10
Total	**$75***

*Including portion of $25 million early contingency fund allocation

Project Criteria

The below project criteria are carried-over from the FY 2020-21 Funding Plan. CARB staff does not recommend any changes to the listed project criteria or incentives at this time.

Scrapped Vehicle Minimum Eligibility Requirements:

1. To receive an incentive from Clean Cars 4 All, an individual must be the registered owner of the vehicle with vehicle title issued in their name.
2. A vehicle that holds a salvage title is eligible for participation if registered asoperable at the time of application.
3. The vehicle must meet one of the following requirements:
    a. It shall meet the DMV requirements as specified in sections 3394.4(b)(6)(C) and 3394.4(b)(6)(D) of Title 16 of Division 33, Article 11 of the California Code of Regulations; or
    b. An unregistered vehicle, or a currently registered vehicle not meeting (c)(1) above, may also be eligible if operated in California for the last two years and not registered in any other state or country in the last two years. Documentation of operation in California includes the following:
        i. Proof of continuous insurance coverage in California for the two consecutive years preceding application to Clean Cars 4 All, without lapses in insurance coverage totaling more than 120 days; or

ii. At least two invoices from an Automotive Repair Dealer registered at the time of the repair with the Bureau pursuant tosection 9884.6 of the Business and Professions Code showing the following:

1. The Automotive Repair Dealer's valid registration number, as issued by the Bureau;
2. The name and address of the Automotive Repair Dealer, as shown on the Bureau's records;
3. Description of a repair or maintenance operation performed to the vehicle;
4. The vehicle year, make, model, and vehicle identification or license plate number matching the vehicle to be scrapped; and
5. The date of the repair or maintenance visit.

iii. Invoices submitted for the purpose of satisfying the requirements of section (B) shall be from two separate calendar years. The oldest invoice may not be older than twenty-four months prior to the date of application receipt.

4. The vehicle must be voluntarily dismantled at a Dismantler under contract with BAR.
5. A vehicle must have a gross vehicle weight rating of 10,000 pounds or less, and be a passenger vehicle, truck, sport utility vehicle, or van.
6. A vehicle must complete a functionality test.

Replacement Vehicle and Mobility Option Incentive Amounts:

1. Program incentives may not be redeemed for the purchase of a dismantled vehicle or a vehicle with a salvaged title (as described in Vehicle Code section 544).
2. Clean Cars 4 All incentives may only be redeemed for mobility options or a replacement vehicle that is 8 years old or newer and that is one of the following:
    a. A conventional hybrid that meets or exceeds a minimum combined fuel economy rating of 35 miles per gallon;
    b. A plug-in hybrid; or
    c. A zero-emission vehicle.
3. An applicant determined to be eligible under the Clean Cars 4 All incentiveprogram may receive one of the following minimum incentives depending on income eligibility and choice of replacement vehicle or mobility option:

Income Eligibility	Eight Years Old or Newer Hybrid Electric Vehicle 35+ MPG (Combined)	Eight Years Old or Newer Plug-In Hybrid and Zero-Emission Vehicle	Mobility Option
Low Income ≤225% FPL	$7,000	$9,500 (Plus, up to $2,000 for electric vehicle supply equipment [EVSE] or pre-loaded charge card)	$7,500 Face Value
Moderate Income ≤300% FPL	$5,000	$7,500 (Plus, up to $2,000 forEVSE or pre-loaded charge card)	$7,500 Face Value
Above Moderate Income ≤400% FPL	Not Available	$5,500 (Plus, up to $2,000 forEVSE or pre-loaded charge card)	$7,500 Face Value

Definitions: Household: Household members include you and your spouse and anyone you claim as a dependent on your tax form. If you are claimed as a dependent on someone else's tax form, your household size includes the person who claimed you as a dependent, that person's spouse, and all claimed dependents including yourself.

Terms and Conditions: Guidelines for the Clean Cars 4 All Program are effective as of June 7, 2019 as required by AB 630 (Cooper, Chapter 636, Statutes of 2017).

More information on the Clean Cars 4 All guidelines can be found here: https://ww2.arb.ca.gov/rulemaking/2018/proposed-guidelines-clean-cars-4-all-and-enhanced-fleet-modernization-programs.

Grant Award Process: Consistent with previous years' allocations, CARB awards Clean Cars 4 All funding non-competitively through grant agreements with the San Joaquin Valley APCD, South Coast AQMD, Bay Area AQMD and Sacramento Metropolitan AQMD, as well as for a new program in the San Diego APCD. This project will continue to require outreach, education, and consumer protections for lower-income consumer recipients living in or near disadvantaged communities. CARB also proposes holding a portion of available funds as a strategic reserve where some or all funds can be allocated to a participating district in response to high program demand.

Project Evaluation and Outcomes

Staff estimates that the $75 million allocated for the Clean Cars 4 All would fund about 6,400 incentives and provide 75,896 metric tons of CO2 equivalent GHG emission reductions. The allocation would also reduce approximately 48 tons of NOx, 2.64 tons of PM 2.5, and 9.67 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 will be taking 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 incentivized 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. Evaluation methods may include surveys in which participants self-report on improved access, and on participant testimonials.

To better identify additional socioeconomic benefits and areas of improvement for the Clean Cars 4 All program, CARB staff is developing an updated participant survey. This survey will provide for more streamlined data collection, analysis, and identification of benefits or areas for improvement. Once this updated survey is finalized and approved, it will be incorporated into future Clean Cars 4 All grant agreements and required to be used in district survey efforts. Staff is also working with the districts in this effort to refine the survey questions and enhance methods to improve data quality and response rate. In addition, data will be analyzed on the types of jobs created and trainings supported by Greenhouse Gas Reduction 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, and training programs administered and credentials awarded.

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 requires that recipients must reside in ZIP codes containing a disadvantaged community census tract. 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.

For the December 1, 2019 through November 30, 2020 reporting cycles, about 41 percent of Clean Cars 4 All funding went to applicants in disadvantaged communities, an additional 30 percent went to applicants living in low-income communities and low-income households that don't overlap with disadvantaged communities, and 27 percent went to applicants living within a ½ mile buffer of a disadvantaged community that don't overlap with either category, 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). 98 percent of Clean Cars 4 All 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 Clean Cars 4 All funding is now benefitting priority populations.[34]

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-61 in Appendix A), but staff expects to exceed this minimum estimate.

CARB has received stakeholder comments suggestion expansion of program eligibility to include zip codes in additional communities such as those under AB 617. However as previously mentioned, CARB also continues to receive comments to further narrow eligibility to strictly disadvantaged community census tracts. Having the program criteria remaining focused on zip codes containing disadvantaged communities ensures a broader range of the priority population can easily gauge their eligibility compared to determining if they reside in the less commonly known census tracts. To ensure the program continues to benefit disadvantaged and low-income populations with as few implementation barriers as possible, staff has elected to maintain the current zip code requirements.

[34] California Air Resources Board. *California Climate Investments: 2020 Annual Report*. p. 44 April 2021. https://ww2.arb.ca.gov/sites/default/files/classic/cc/capandtrade/auctionproceeds/2021_cci_annual_report.pdf

Financing Assistance for Lower-Income Consumers

Proposed Low Carbon Transportation Allocation
$23.5 million

Project Goals

The Financing Assistance for Lower-Income Consumers Pilot Project (Financing Assistance) provides financial resources to help lower-income Californians purchase advanced clean vehicles. The project offers vehicle price buy-downs (grants), EVSE grants, and fair financing through lower interest loans at the point-of-sale.

Financing Assistance complements CVRP and Clean Cars 4 All by offering low-interest loans to participants in those programs. Program administrators provide financial education and advanced vehicle technology training to ensure consumer protection, increase the chance of successful loan repayments, and ensure that the vehicles chosen by participants appropriately meet their transportation needs. Participating financial institutions and lenders in this project are being offered funds for a loan loss reserve to mitigate risk.

There are two different programs under this project: a local program and a statewide program. The Driving Clean Assistance Program (DCAP) administered by Community Housing Development Corporation (CHDC) is the local program that serves twelve counties in Northern California. The Clean Vehicle Assistance Program (CVA Program) is the statewide program, administered by Beneficial State Foundation that provides incentives to consumers across the State.

Current Project Status

CHDC, a community-based organization (CBO), received a $6.9 million grant to serve low-income residents living in the nine Bay Area counties, Yolo, Santa Cruz, and recently Sacramento counties. So far, CHDC has provided 276 grants, helped secure 212 low interest rate loans, and issued 91 EVSE grants to participants. Loans issued under this program have traditionally been under 8 percent interest and are further supported by a loan loss reserve account with participating financial partners.

The CVA Program has been awarded $36.8 million and since inception, the program has provided 4,325 vehicle grants, 1,557 EVSE grants, and facilitated 1,557 vehicle low interest loans to program participants.

Due to higher-than-expected demand, on March 17, 2021 a reservation list was put in place, but soon reached its maximum capacity and the program closed to new applicants on April 14, 2021.

Proposed Funding Allocation

Based on initial projections of funding needs and considering recent allocations, staff estimates the Financing Assistance project demand is between $35 million and $50 million

for FY 2021-22. However, because funding to the equity category is limited, staff is only proposing $23.5 million in funding this year.

Staff plans to use up to $8 million of the FY 2021-22 appropriation to fund grants on the current reservation list for the Financing Assistance program. This would align with the Contingency Provisions set forth in the FY 2020-2021 Funding Plan for Clean Transportation Incentives, which gave authority to the Executive Officer to immediately allocate limited funding to ongoing voucher and rebate consumer purchase incentive projects to prevent or reduce program interruptions. Staff has begun the process of adding a portion of these funds into the current grant. This allows the program administrator to start processing applications and issuing grants to those on the reservation list. The remaining $15.5 million would support the project with staff's proposed changes below.

Proposed Changes to Project Criteria

Based on the project data for the last few years, and as presented at the June 17, 2021 work group, staff recommends transitioning from two pilots to one full-fledged statewide program.[35] CARB has learned many valuable lessons and with proper policy and program changes, staff can structure the program to better serve low-income consumers and consumers in disadvantaged communities. Staff proposes to work with the existing grantees to determine the appropriate approach to transition to a single program. Specific program changes are identified below.

- **Adopt a Needs Based Approach:** Unlike market-focused incentive programs, equity programs intend to help financially challenged consumers and facilitate their access to resources that might not be available in competitive markets. Therefore, staff believes that it is necessary to transition from a first-come, first-served model to a needs-based model. In a needs-based model, consumers' applications will be prioritized depending on their needs and financial situation. Staff will collaborate with stakeholders to determine the metrics used to prioritize applications and match consumers to the services that meet their needs. For instance, a consumer with poor credit score will be set up to receive financial literacy and counseling and upon credit score improvement, will receive assistance through the purchase process.
- **Graduate Conventional Hybrids:** Project data shows that a small percentage of participants purchased conventional hybrid vehicles (only 4 percent in CVA Program and 11 percent in DCAP). BEVs and PHEVs are more popular among all income groups with 68 percent and 28 percent share respectively. BEVs are the most popular choice statewide, but PHEVs are more popular among very low-income applicants. Staff proposes removing conventional hybrid vehicles from the program to focus the programs limited funding on the cleanest, most advanced technologies in line with State goals to deploy more electric vehicles.

[35] California Air Resources Board. *Workgroup Meeting on: Vehicle Purchase Incentive Projects for Low-Income Consumers (Financing Assistance and Clean Cars 4 All).* June 17, 2021 https://ww2.arb.ca.gov/sites/default/files/2021-06/fa_wkgrp_pres_06172021.pdf

- **Other Changes:** Apply a vehicle purchase price cap of $40,000, loan term up to 60 months, and loan amount cap of up to $25,000 or other loan and purchase price requirements that staff believes will help direct funds toward those who need them the most and that best support the needs-based approach. Additionally, program data shows that a majority of very low-income participants prefer to purchase less expensive vehicles and subsequently take lower loan amounts. Their preferred choice is not to lease a vehicle, but to purchase low mileage used EVs that are off lease contracts. Therefore, staff recommends excluding lease options from this project and helping consumers purchase vehicles they can hold onto longer.

  Finally, staff also recommends lowering the Annual Percentage Rate (APR) of loans issued to 8 percent across the board (the current cap for partner banks is 8 percent and outside lenders is 12 percent) and expanding the partner banks network.

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://dcap.communityhdc.org/

These documents are incorporated into the proposed 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 selected a grantee to administer FY 2017-18 Statewide Financing Assistance Project funds via a competitive solicitation and awarded additional funds from FY 2018-19 and FY 2019-20 to the selected grantee under the same terms and conditions. Staff expects to release a solicitation in late 2021 and have a grant in place for the FY 2021-22 funds in 2022.

Project Evaluation and Outcomes

Staff estimates that the proposed $23.5 million allocation for the Financing Assistance would fund about 2,470 grants and provide 20,380 metric tons of CO2 equivalent GHG emission reductions. The allocation would also provide 1.42 tons of NOx, 0.91 tons of PM 2.5, and 0.29 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 & 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.[36]

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.

[36] 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 Mobility Investments

Clean mobility investments are an increasingly important complement to vehicle replacement programs. By continuing to ensure funding is made available to increase access to clean transportation and mobility choices for communities, programs such as car sharing and ride sharing can reduce the need for new vehicles and avoid the use of existing, older vehicles. Because California's air pollution problems are worsened by increasing vehicle miles traveled (VMT) even as individual vehicles become cleaner, these programs focus on a critical need. Although accelerating purchases of cleaner vehicles, and expanding turnover of existing vehicles, are important, California ultimately needs planning and mobility strategies to shift the nature of its transportation systems – especially in lower-income communities that have lacked transportation choices. These programs focus on these systems change needs, and, if expanded in future years, could play an even more important part in transitioning our transportation system.

CARB has funded clean mobility investments since FY 2014-15 and has learned from these early projects how to better address community specific transportation needs. With the development of CARB's SB 350 Guidance Document, CARB identified many barriers to accessing clean transportation and mobility investments and provided recommendations to inform these investments. These barriers include affordability and the lack of access to or awareness of funding opportunities. Using a public process, drafting the Guidance Document included many information gathering sessions, direct engagement with community members and participation in community-led meetings, meetings with stakeholders, and regional case studies. The Guidance Document prioritized recommendations to provide meaningful clean mobility options for low-income and disadvantaged communities.

CARB's continued clean mobility investments support the Guidance Document recommendations, including complementing vehicle purchase incentives with clean and equitable community driven mobility solutions. The solutions that can provide clean mobility options in low-income and disadvantaged communities include zero-emission car and bicycle sharing, vanpooling, and clean school buses, or combinations thereof. These solutions also address SB 350 and SB 150 Progress Report findings that clean single-occupancy vehicles are not the only path forward for CARB to reach its equity, air quality, and GHG reduction goals, and, though an essential part of the picture, cannot, on their own, provide a viable path towards those goals.

For FY 2021-22, CARB is focusing on refining existing projects within the portfolio of clean mobility investments, analyzing socioeconomic benefits, and identifying potential gaps for future investments to meet community-identified needs. The existing portfolio of clean mobility investments include:

- Clean Mobility Options
- Clean Mobility in Schools Pilot Project
- Agricultural Worker Vanpools Pilot Project

- Rural School Bus Pilot Project[37]
- Sustainable Transportation Equity Project (STEP)

Based on existing funded projects, it is increasingly clear that each community faces unique challenges, but with new challenges arise new opportunities. There is no single statewide solution to address all barriers—especially those faced by overburdened communities disproportionately bearing climate and air quality impacts. This highlights the importance of developing thorough community transportation needs assessments that focus CARB's equity strategies on building mechanisms to overcome barriers. Furthermore, the current public health crisis has demonstrated the importance of having a diverse slate of clean transportation and mobility strategies to address unique travel needs and behavior.

Rigorous community transportation needs assessments arise through understanding the existing transportation planning landscape and centering trust in CARB's partnerships with community-based organizations and residents. By asking residents what types of advanced clean technologies and strategies they would like to see that would most meet their needs and matching those needs with creative, tailored mobility solutions, CARB can support their vision of clean mobility investments and equity goals in their community. This requires outreach via an open, ongoing dialogue, and a community-led process while delivering tailored clean mobility investments. Open communication ensures that vital needs are met, critical gaps are filled, applications are streamlined, and policy adjustments are made in a timely manner to allow for a smooth transition to an equitable zero-emission future.

Advancing Clean Mobility Investments

The FY 2021-22 Funding Plan marks CARB's eighth year of funding clean mobility investments. Since the beginning, CARB has seen value in implementing a pilot program approach to clean transportation and mobility investments to allow flexibility, incorporate ongoing stakeholder and community feedback, and make adjustments where necessary. As noted above, each project is unique, and the pilot phase is critical to discover how each project can best achieve their specific goals and find solutions to the numerous obstacles faced by low-income and disadvantaged communities. As pilot projects mature and move to the full program implementation phase, there are opportunities to expand and replicate proven strategies and models to maximize benefits and participation across communities.

CARB continues to coordinate with State and local partners to ensure accessibility and transparency in developing mobility programs. To broaden clean mobility investments and further address equity needs, CARB plans to leverage the incentive programs to expand workforce training and career development. CARB is working with project administrators to identify pathways to self-sufficiency allowing future independent operation of equity projects without relying on Low Carbon Transportation funding to remain sustainable.

CARB has seen an increasing need to identify and implement clear, measurable metrics to assess and track progress of clean transportation and mobility equity investments. In order to

[37] After several years of successful implementation, the Rural School Bus Pilot Project is transitioning from a pilot to a full-scale project to be implemented through HVIP.

develop a project evaluation strategy and address the CARB Audit Report recommendations, CARB is first analyzing lessons learned across the suite of clean transportation incentive programs to determine a path forward for developing and reporting equity metrics across projects. CARB is prioritizing a data collection methodology to quantify equity and incentive program outcomes and determine if they are achieving intended community benefits. As part of this effort, CARB is determining a process through its workshop and public work groups to define, collect, and use data to measure and report on each clean transportation and mobility equity metric, identify direct and measurable community benefits, such as socioeconomic, job, workforce training and development, and other quality of life improvements, and a public and community engagement and reporting process. Central to CARB's evaluation strategy and metrics assessment is intentional and meaningful community engagement throughout the process, including soliciting and elevating ideas on how CARB should measure and report benefits and remaining gaps, and providing strong feedback loops for policy and program adjustments based on findings, including with the public and the Legislature.

To aid in identifying and implementing evaluation metrics, CARB has contracted with the UC Berkeley Transportation Sustainability Research Center to develop an evaluation framework for assessing the effectiveness, sustainability, and outcomes of pilot projects. This framework will be applied to evaluate and compare existing projects and identify what criteria contribute to project success. An assessment of community engagement strategies for future projects will also be conducted. The project will result in policy recommendations for consideration in implementing existing and future clean transportation projects and methods of incorporating lessons learned.

Clean Mobility Options

Proposed Low Carbon Transportation Allocation
$10 million

Project Goals

Clean Mobility Options (CMO) is a funding category intended to assess and address the barriers and transportation needs of low-income residents and disadvantaged communities and provide funding for mobility options to help address those needs. By combining community transportation needs assessments, other forms of community input and engagement, and direction from the SB 350 Guidance Document, projects in this category are tailored to meet communities' unique transportation needs and improve access to affordable, convenient, and reliable clean mobility options that do not require but can complement vehicle ownership. The project category provides funding for clean, shared transportation options, including zero-emission car sharing, vanpools, electric and regular bicycle sharing, scooter sharing, and ride-hailing services. The projects are designed to connect with current or future innovative mobility hub concepts that promote multimodal trips, including co located passenger rail, bus/shuttle, ride-hailing, public charging, and first mile/last mile transit solutions. Financial self-sustainability is a goal for projects funded within this category, and staff continue to work with project grantees to reduce reliance on subsidies while maintaining affordability to users.

One of CARB's goals is to streamline the CMO mechanism that supports and maximizes community investments. This project category has historically awarded grants via a competitive solicitation and entities must have the knowledge and resources to be competitive. This in turn leaves many communities without the opportunities to address their transportation challenges. CARB created the Clean Mobility Options Voucher Pilot to address these barriers and create more opportunity for communities statewide to conduct community transportation needs assessments and create clean mobility options based on community feedback. This pilot provides communities with technical assistance and capacity building from the beginning of the planning process through the application process, helping to understand the program requirements and how to apply, and once funded the assistance to develop, launch and sustain mobility projects. In addition, the program provides a variety of tools to help with the needs assessments, outreach, and mobility operations that would not have been possible through a competitive solicitation.

Staff's intention is to have the Clean Mobility Options Voucher Pilot become the primary mechanism of CMO funds in order to equitably disperse funds across California's most overburdened communities. If this pilot is successful using an administrator approach, staff hope to continue funding it in future years to help many more communities to help meet their SB 375 requirements and fill critical mobility gaps with clean transportation options.

Current Project Status

Over $55 million in Low Carbon Transportation Investments have been allocated to the initial Clean Mobility Options pilot projects and statewide Clean Mobility Options Voucher Pilot mobility investments since FY 2014-15. Funds have been awarded for seven projects benefiting priority communities throughout California. These funds have leveraged over $30 million in private and public match funds thus far. The CMO project allocation in FY 2019-20 was earmarked for expansion of the existing pilot projects. Current grantees were required to apply for expansion funding through CARB in order to receive additional funding. Additional information on these projects is included in the following sections, as well as in Appendix G.

As part of CARB's efforts to strengthen collaboration with State partners, maximize investments in priority communities and address stakeholder and community feedback on the need to expand funding opportunities staff pursued co-funding opportunities, including with the CEC. As a result of this collaboration, CEC is partnering with CARB through an interagency agreement to increase funding for this program by adding $8 million from CEC's Clean Transportation Program to the Clean Mobility Options Voucher Pilot for additional vouchers, technical assistance, capacity building in communities, and outreach efforts.

The impact of COVID-19 is ongoing and has caused shifts in needs while increasing costs. All projects had to pause service or, in the case of the Valley Air ZEV Mobility Pilot, cease operations entirely. Many of the projects have relaunched and will work to return to normal service as conditions allow. The following is a brief description and update on CMO projects.

BlueLA Car Share

- Since 2014, the City of Los Angeles (City of LA) has received a total of $4.7 million for a zero-emission car share pilot project in 13 disadvantaged communities. Project partners include the Shared Use Mobility Center, several City of Los Angeles departments including the Department of Transportation, the Los Angeles Department of Water and Power, Mobility Development Partners, Blink Mobility, and community-based and environmental justice organizations including the Coalition for Clean Air, Communities for a Better Environment, East LA Community Corporation, LA Más, Korean Immigrant Workers Alliance, Move LA, Salvadoran American Leadership and Educational Fund, PATH Ventures, and T.R.U.S.T. South LA. To increase community engagement and increase awareness, BlueLA has held 15 neighborhood meetings, 16 community forums, and 273 pop-up events as of July 2021.
- The project launched to the public in April 2018 and has progressed to include 60 electric vehicles and about 200 chargers. As of July 2021, BlueLA has a total of 2,300 users that have taken 63,000 total trips and driven over 1,300,000 gasoline-free miles throughout the Los Angeles area.
- The most recent usage surveys were conducted in the third quarter of 2018. Respondents were asked to list all types of trips in which they used BlueLA and because of this methodology, the following percentages will total more than 100 percent. A majority of respondents (67 percent) indicated trips included grocery or

household shopping, while 26 percent stated that their trips included outdoor recreation or visits to local parks. Trips including exhibitions or museums comprised 20 percent. 22 percent of respondents reported job or school related trips. The most recent user satisfaction survey conducted in the first quarter of 2019 had 30 responses and indicated an 85 percent satisfaction rate.

- In the next couple of years, the City of LA will increase the number of vehicles up to 300 electric vehicles and up to 600 electric bicycles and scooters. This expansion has been temporarily delayed because of the change in the EV operator.

Our Community Car Share

- Between 2014 and 2021, Sacramento AQMD received $5.8 million for electric car sharing services for Sacramento affordable multi-unit housing communities. Services are available at 10 community housing sites with additional sites expected to launch later in 2021. The project also provides a subsidized transportation voucher program for non-driving residents that utilizes pre-paid incentive cards for ride hail services, e-bike sharing, and regional transit. Our Community Car Share project partners include Breathe California, Sacramento Housing and Redevelopment Agency, Mutual Housing California, Community Housing Opportunities Corporation, Eskaton, Green Tech, Sacramento Municipal Utilities District, the City of Sacramento, and Zipcar.
- CARB awarded $1.5 million in expansion funding from the FY 2019-20 allocation to continue development of the project. This expansion takes a larger, regional approach by supporting mobility services in centralized locations to serve a wider range of residents living in low-income and disadvantaged communities. The launch of this expansion will begin in 2022.
- As of June 2021, membership includes 671 users, of which 123 are non-driving members using transportation incentive cards. The average participation rate across all communities is 38 percent, with a low of 30 percent and high of 71 percent. Data reported through June 2021 indicates over 738,690 electric vehicle miles traveled.
- In post-trip surveys conducted between March 2021 and May 2021, a majority of respondents (71 percent) indicated that the purpose of their trip had been grocery or household shopping, while 12 percent stated that their trip had been for a health care or medical appointments. Nine percent of respondents reported job related trips, and nine percent reported school related trips. Entertainment, recreation, and social activities comprised three percent of vehicle use.
- Participant surveys were distributed at events, community visits and online via email over the course of 2019. Out of 443 members at that time, 13 percent responded, and of those, 77 percent gave the program a 5-star rating and 86 percent would recommend the program to others. A more recent survey conducted between March and May of 2021 was sent to members enrolled in the service for at least 90 days. Sixty-two members responded, with a 12 percent response rate. Of those, 52 percent gave a 5-star rating, 29 percent a 4-star rating, and the remainder 3-star rating or below. The majority of respondents, 67 percent, reported wanting more vehicles, while 58 percent wanted expanded reservation hours, and 31 percent wanted the cars to be cleaned more often.

Lift Line Paratransit Dial-a-Ride Electric Vehicle Transition Program

- In FY 2016-17, Community Bridges received a $268,219 grant to purchase two ADA equipped electric EV shuttle buses which replaced two internal combustion engine shuttles for Lift Line service based in Watsonville. The shuttle buses are available to participants who are: low-income Santa Cruz County residents, under 200 percent of the federal poverty level, 60 years of age or older, and/or have a disability. The project includes two level-2 chargers and began service in spring 2019. This project currently serves over 800 underserved community members and will continue to address unmet transportation needs and help to transition Lift Line's fleet to zero-emission in Santa Cruz County's disadvantaged communities.
- CARB awarded $247,600 in expansion funding from the FY 2019-20 allocation. The funding will provide an additional ADA-equipped EV shuttle and operator to replace an existing internal combustion engine shuttle.

Car Sharing and Mobility Hubs in Affordable Housing Pilot Project

- In FY 2016-17, the Metropolitan Transportation Commission was awarded $2.25 million for an electric vehicle and e-bike sharing pilot project. The project addresses gaps in clean transportation and mobility access in the priority communities of San Jose, Oakland, and Richmond. Once fully operational the pilot project will serve approximately 6,000 residents. Partners include TransForm, Bay Area AQMD, GIG Car Share, Shared Use Mobility Center, AC Transit, Santa Clara Valley Transportation Authority, and The Greenlining Institute.
- TransForm conducted a community transportation needs assessment in 2019 to tailor the design of mobility solutions to meet each community's unique needs and provide a foundation for comprehensive mobility planning across affordable housing developments. A report documenting key findings was released publicly in February 2020, which provides lessons for CARB's suite of clean transportation equity projects and highlights, consistent with CARB's SB 350 Guidance Document, the importance of prioritizing and incentivizing community transportation needs assessments before implementing equity projects.
- CARB awarded $765,000 in expansion funding from FY 2019-20 to maximize data collection and analysis over an 18-month period and plan for project sustainability.
- Car share services in San Jose are anticipated to launch in late 2021, and Richmond car share is anticipated to launch in early 2022.

Valley Air ZEV Mobility Pilot

- In FY 2016-17, San Joaquin Valley APCD received $749,800 for a combined service of electric vehicle car sharing and vanpooling for disadvantaged community residents of Merced, Bakersfield, and Fresno County. The project began operations in 2019 and included nine electric vehicles (six Chevy Bolts and three Tesla Model Xs), 29 publicly accessible level-2 chargers, and three DC fast chargers. Partners include Green Commuter and CALSTART.

- This project was unable to resume operations following the initial COVID-19 shutdown and subsequent lack of demand for shared mobility in a couple of communities. Project partners will examine data and share lessons learned with CARB and other clean mobility partners.

Ecosystem of Shared Mobility

- In FY 2016-17 San Joaquin Valley APCD received $2.25 million for an electric vehicle car sharing project serving eight disadvantaged community affordable housing complexes in rural Tulare and Kern Counties. The project includes 27 electric vehicles with 17 publicly accessible chargers for an electric car sharing service called MíoCar and has a volunteer ride-hailing component for non-drivers called Volunteers on the Go (VOGO). The project also developed a transportation planning app called VAMOS, which allows users to plan trips in the San Joaquin Valley across multiple transit agencies. This mobility as a service (MaaS) platform maximizes trip efficiency and includes electric car sharing reservations, EV ride-hailing, bike routes, and the option to pay fares through the app. Partners include Sigala Inc, UC Davis Institute of Transportation Studies, Self-Help Enterprises, Mobility Development Group, and Stanislaus County based non-profit MOVE. The project launched the car sharing service MíoCar in early 2020.
- CARB awarded $869,000 in expansion funding from FY 2019-20 to continue and expand this project, fully launch the car share and mobility services MíoCar, VAMOS and VOGO, maximize data collection and analysis over an 18-month period, and plan for project sustainability.

Statewide Clean Mobility Options Voucher Pilot

- From 2017 through 2019, CALSTART was awarded $32 million through a competitive solicitation to serve as CARB's statewide clean mobility options projects administrator. These community-driven projects are designed to increase access to clean transportation for residents based on their needs and priorities. Projects are awarded funding on a first-come, first-served basis for disadvantaged communities, affordable housing in low-income communities, and tribal governments.
- In FY 2019-20, CARB awarded an additional $5.2 million to further expand project resources. CARB has seen a very high demand from communities for a streamlined approach to implementing small-scale clean mobility options with community feedback derived from the transportation needs assessments. There has also been significant demand for more robust technical assistance, which further lowers the barriers to accessing funding, contributes to capacity building in communities, and helps to ensure strong project design and successful implementation.
- In June 2020, CALSTART opened the application window for entities to apply for Community Transportation Needs Assessment Vouchers with total funding of $1.15 million (each voucher award up to $50,000). This funding allocation was oversubscribed on the first day. The program administrator received 44 applications

requesting over $1.9 million in funding which resulted in 24 awards[38] to eligible disadvantaged communities and tribes across 14 counties. These assessments will help communities engage their residents to identify their unmet mobility needs, develop solutions that will work best for them, and provide a strong foundation to be able to apply for Mobility Project Vouchers in future funding windows.

- In October 2020, CALSTART opened the application window for entities to apply for Mobility Project Vouchers with total funding of $20 million (each voucher award up to $1 million) including a $2 million set-aside for tribal governments. The program became oversubscribed shortly after the application window opened. CALSTART received 33 applications requesting over $31 million in funding which resulted in 20 awards to eligible disadvantaged communities, affordable housing in low-income communities, and tribal governments across 11 counties. Over 50 percent of mobility project awards are in Southern California with four projects in Los Angeles County, three projects in San Bernardino County, two projects in Riverside County, two projects in San Diego, and one project in Imperial County. About 25 percent of awards are in Northern California and the Bay Area with two projects in Alameda and two projects in Contra Costa Counties, in addition to one project in Shasta County. The rest of mobility project awards are in the Central Valley with two projects in Fresno County, and one project in San Joaquin County.
- As previously mentioned, CARB is partnering with CEC through an interagency agreement to expand program eligibility and funding by adding $8 million to the program for the next application window anticipated to launch in early 2022.

Proposed Funding Allocation

Staff recommends that $10 million be allocated in FY 2021-22 to expand the Statewide Clean Mobility Options Voucher Pilot through the existing grant agreement. This recommended allocation takes into consideration funds allocated and reallocated from previous fiscal years, leveraged funds, as well as communities that are conducting Community Transportation Needs Assessments. These additional funds would allow for about $20 million to be available in the next funding window for both voucher types. Staff continuously evaluates the current projects and explores possible adjustments based on lessons learned. In addition, staff would have the flexibility to direct any funding that is not awarded for CMO projects to fund other clean transportation equity projects that show demand and meet the most critical needs of priority populations.

Proposed Changes to Project Criteria

Staff is not currently considering any major changes to this project category or proposing new projects. CARB is focusing on continuing and expanding existing projects to apply lessons learned, making adjustments that bring the projects into continuously improving

[38] https://www.cleanmobilityoptions.org/2020-community-transportation-needs-assessment-voucher-awardee-press-release/

alignment with project goals, and maximizing benefits in communities to help ensure long-term, sustainable mobility options continue to be available.

Terms and Conditions: 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 an Implementation Manual, which includes the terms and conditions, to further define these rules and define requirements and duties.

The Terms and Conditions and the Implementation Manual for the Clean Mobility Voucher Pilot Program will be linked on the program webpage in October or November: http://www.cleanmobilityoptions.org/implementation-manual

This document will be incorporated into the proposed Funding Plan by reference and will be updated periodically throughout the year to reflect program 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 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. Additional funds proposed in this Funding Plan would be a fourth year of funding added to the second funding window that is anticipated to launch in early 2022. CARB staff is proposing to not release a new solicitation this year for the second funding window, to minimize any delays in supporting community needs in this ongoing program. In future years, if funding became available for additional funding windows, CARB staff may propose to hold a new competitive solicitation.

Project Evaluation and Outcomes

Staff cannot estimate the exact emission benefits until projects are fully deployed and implemented. Measures of success include the numbers and types of clean vehicles, chargers, and clean mobility options introduced into disadvantaged communities, number of residents participating as drivers or riders, zero-emission vehicle miles traveled, and number of trips taken, and improvements in access to mobility experienced by participants. Staff provides an example of the magnitude of anticipated benefits by quantifying the emission reductions associated with a "sample" project based on assumptions described in Appendix A. The proposed allocation of $10 million is estimated to provide 2,136 metric tons of CO2 equivalent GHG emission reductions, 0.12 tons of NOx, 0.09 tons of PM 2.5, and 0.03 tons of ROG reductions over the project's total lifetime.

Staff anticipates these projects will provide socioeconomic benefits, such as improving priority populations' access to goods and services and workforce training and development opportunities, in addition to promoting improved air quality in communities. Evaluation methods of socioeconomic benefits include participant surveys and other forms of direct participant feedback, and vehicle/equipment telematics data. Metrics include usage data

such as vehicle miles traveled, vehicle/equipment utilization rates, number of reservations, number of hours reserved, vehicle trip types, and user satisfaction. Staff also plans to refine and seek out other evaluation metrics through workshops and public work groups.

AB 1550 Disadvantaged Community & Low-Income Household/Community Benefits: Consistent with FY 2018-19 Clean Mobility Options for Disadvantaged Communities project requirements, staff proposes that funding be eligible for projects that may be outside of disadvantaged communities but will benefit them by providing better access to the residents of these communities. After analyzing barriers administrators faced in the current projects and in talking with stakeholders during the public work group meetings, staff proposed in a previous funding plan that Clean Mobility Options be expanded to projects that benefit priority populations within AB 1550 designated areas and to tribal governments. This recommendation may be applied retroactively to all the pilot projects funded since FY 2014-15 grant solicitations. 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 Clean Mobility Options funding as being within and benefiting priority populations even though staff expects some of the funds will meet those criteria as well.

Clean Mobility in Schools Pilot Project

Proposed Low Carbon Transportation Allocation
$10 million

Project Goals

The Clean Mobility in Schools Pilot Project (CMIS) facilitates bold transformations in transportation and mobility opportunities in and around school communities. Grants provide funding for zero-emission vehicles, charging infrastructure, active and alternative modes of transportation, and more. CMIS projects aim to increase knowledge and acceptance of zero-emission mobility options for staff, students, parents, and the surrounding communities. Additionally, projects must be located within a disadvantaged community.

Each project also aims to gain a better understanding of "mode-shifting" and what the school districts can do to further serve the school and the community in promoting and incentivizing the shift to cleaner and active modes of travel. This process includes a deeper understanding of community needs to effectively communicate and incentivize behavior shifts.

Current Project Status

$24.6 million was awarded to three grantees with FY 2018-19 and FY 2019-20 Low Carbon Transportation Incentives. Awarded projects are leveraging over $210,000 in private and public match funds.

Located in El Monte, San Diego, and Stockton, each school district was impressively able to identify solutions to the unforeseen challenges COVID-19 required just as the projects prepared to launch in May 2020. Each project features strong relationships with local utility providers, project management partners, technology vendors, and dependable and innovative district staff working together to create a sustainable, impactful model for future scholars and leaders.

CMIS grantees are collecting data from vehicles, charging hardware, utility bills and investment strategies, as well as qualitative research on participation rates and opinions through user surveys and tally sheets. Data collection efforts include both one-time collection of information (e.g., specifications) and ongoing data streams (e.g. performance data) of both vehicles and equipment. The following is a brief description of the projects.

El Monte High School District

- The El Monte Union High School District received $9.8 million in funding. Their project takes place in the heart of the San Gabriel Valley, one of the State's most disadvantaged communities. The project includes: 11 battery electric school buses; 11 electric maintenance vehicles; three zero-emission carpool vehicles; five energy storage systems; charging hardware to support electric vehicles; an active

transportation feasibility study that encompasses six school sites; and a Clean Energy Fellowship. The project will also deploy a communications plan and create a zero-emission technology curriculum tailored to their Career Technical Education pathways.
- The project partners include Gladstein, Neandross & Associates; VMA Communications, Inc.; University of California, Riverside; San Gabriel Valley Conservation Corps; Fehr & Peers; A to Z Bus Sales; El Monte / South El Monte Chamber of Commerce; Greenlots; and Engie.

San Diego Unified School District

- The San Diego Unified School District received $9.8 million in funding. Their project takes place in the Lincoln High School cluster area. The project includes: one battery electric food delivery truck and one food serving vehicle; a variety of zero-emission landscape and custodial equipment including maintenance vehicles and crew trucks, power washers, mowers, and more; two zero-emission carpool vehicles; 13 battery electric school buses with managed charging stations, vehicle-to-grid capability and two battery storage units; a robust public education effort to support behavior changes for students, parents and staff; two electric bicycle sharing projects for senior students and teachers; and a replicable template for other districts to use for implementing similar projects.
- The project partners include CALSTART; S Curve Strategies; Center for Sustainable Energy; Circulate San Diego; Cleantech San Diego; Environmental Health Coalition; San Diego Gas & Electric; Black & Veatch; and Nuvve.

Stockton Unified School District

- The Stockton Unified School District received $4.9 million in funding, a lower amount than requested in their proposal. Located in the Central Valley, the project aims to build a master plan to quickly move the school district towards becoming California's first fully carbon neutral school district. The project includes: a carbon emissions analysis of baseline and future pathways; four battery electric school buses; 22 managed charging stations; a variety of zero-emission maintenance and landscape equipment including eight maintenance vehicles; an expansion of a student-led Energy Patrol programs to all 56 school sites; and outreach and communication events in the school and surrounding community.
- The project partners include The Center for Transportation and the Environment; Sage Energy Consultants; Schneider Electric; and The Mobility House.

Proposed Funding Allocation

Staff recommends allocating $10 million to Clean Mobility in Schools to provide the remainder that was unfunded to the third top-ranked grantee, about $2.3 million, which covers four additional electric school buses to Stockton Unified School District. The remaining funds will be awarded to the next highest-ranked application received from the FY 2018-19 solicitation. This recommended allocation helps to achieve several benefits.

First, awarding funds down the existing list of ranked applications will expedite the funds helping disadvantaged communities as a new solicitation process will take longer. Second, the additional new grantee would benefit from the collaboration with the other three grantees as they are all highly motivated and include a broad range of established and seasoned project partners. Third, this will maximize the outcomes of the first solicitation. Lastly, this will provide additional analysis and lessons for future program design.

Proposed Changes to Project Criteria

Staff is not currently proposing any major changes to Clean Mobility in Schools Pilot Projects. This year, CARB is focusing on data collection and assessing implementation best practices from the existing projects. CARB will use these findings to apply lessons learned, improve future project criteria, and maximize benefits in the school communities to help ensure long-term, sustainable transformation strategies continue to be explored and implemented.

Project Solicitation: As noted above, staff recommends fully funding the third ranked project that had previously only received a portion of the funds requested and funding the next highest-ranked application received in response to the FY 2018-19 Clean Mobility in Schools Pilot Project solicitation.

Project Evaluation and Outcomes

This project encourages holistically reducing GHG emissions on school campuses by transforming the transportation systems in and around schools. Staff estimates that the $10 million allocated for CMIS would provide about 19,087 metric tons of CO2 equivalent GHG emission reductions. The allocation would also provide 18.28 tons of NOx, 1.33 tons of PM 2.5, and 5.6 tons of ROG emission reductions. Appendix A provides additional details on the emission estimates. Criteria pollutant and toxic air contaminant emission reductions are also expected as the advanced technology vehicles and equipment replace conventionally-fueled engines.

A socioeconomic benefit of these projects is improving visibility and acceptance of zero-emission mobility options. Evaluation methods consist of participant surveys and other forms of direct participant feedback, and vehicle/equipment telematics data. Metrics include school district staff feedback on usage purpose and satisfaction, usage data such as vehicle miles traveled, vehicle/equipment utilization rates, number of trips in new vehicles, number of hours of use of new equipment, and likelihood of adopting the options for personal use. There are over 10,000 schools throughout California that could adopt similar clean technologies and practices.

AB 1550 Disadvantaged Community and Low-Income Household/Community Benefits: The FY 2018-19 Clean Mobility in Schools Pilot Project solicitation required all funds awarded for the Clean Mobility in Schools Pilot Project be located in and benefitting disadvantaged communities, and since staff proposes to award funds to applications on the current list from the previous solicitation, this requirement will continue for FY 2021-22 funds. 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 Clean Mobility in Schools Pilot Project 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.

Sustainable Transportation Equity Project

Proposed Low Carbon Transportation Allocation
$25 million

Project Goals

The Sustainable Transportation Equity Project (STEP) is a pilot project first introduced in FY 2019-20. STEP funds community-based solutions to address transportation inequities and facilitate socioeconomic benefits in low-income and disadvantaged communities. The pilot is designed to help overcome barriers identified in CARB's SB 350 Guidance Document and address key challenges outlined in CARB's 2018 SB 150 Progress Report.

STEP is piloting an approach to Low Carbon Transportation funding that aims to 1) address community residents' transportation needs, 2) increase access to key destinations (such as schools, grocery stores, workplaces, daycare facilities, community centers, medical facilities), and 3) reduce GHG emissions. Whereas Clean Mobility Options provides smaller vouchers for a narrower set of clean transportation projects on a first-come, first-served basis, STEP provides an opportunity for communities that are prepared for larger-scale investments by funding multiple different types of clean transportation and supporting projects within a single community. STEP has the flexibility to fund many different types of capital, operations, planning, and capacity building projects to help meet the needs of each community within that community's context.

By funding different types of clean transportation and supporting projects within a single community, STEP facilitates collaboration between community residents, local public agencies, and private partners. This collaboration is critical for creating a cleaner, more accessible, and integrated transportation system that benefits the community residents that need it most. STEP also acknowledges the intersection of the climate, transportation, and equity sectors, and aims to establish new and strengthen existing partnerships between these sectors.

Current Project Status

Using FY 2019-20 funds, CARB released a $19.5 million competitive solicitation on June 4, 2020 and closed the solicitation on August 31, 2020. CARB partnered with the Strategic Growth Council to provide technical assistance on application development to all interested applicants. Applicants submitted 34 proposals (14 Implementation Grant proposals and 20 Planning and Capacity Building Grant proposals), requesting almost $109 million, which was over five times the available funding.

CARB awarded three Implementation Grants, totaling $17.8 million, to the San Joaquin Council of Governments, the City of Commerce, and the Los Angeles Department of Transportation (LADOT). Based on the remaining funds available, LADOT was only awarded half the funds requested. Through STEP's Implementation Grants, the selected disadvantaged communities will create and evaluate new, innovative strategies to address

community residents' transportation needs and increase residents' access to key destinations, while simultaneously reducing GHG emissions and vehicle miles traveled. The suite of components funded in these Implementation Grants includes a wide variety of larger-scale clean transportation and supporting projects that increase mobility and reduce vehicle miles traveled, such as electric carshare, bikeshare, and shuttle services; public transit subsidies and network-fare integration projects; bike lanes; urban forestry; community outreach and education; workforce development projects; and transit-oriented development and displacement avoidance planning—all while centering community needs and decision-making.

CARB also awarded eight Planning and Capacity Building Grants, totaling $1.7 million, to the Oakland Department of Transportation, Circle of Life Development Foundation dba MLKCommUNITY Initiative, Omnitrans, Isla Vista Community Services District, City Heights Community Development Corporation, Anaheim Transportation Network, Solano Transportation Authority, and City of South El Monte. Planning and Capacity Building Grants fund larger-scale community engagement and community transportation needs assessments necessary to help the selected low-income and disadvantaged communities identify, prioritize, and prepare to implement clean transportation and supporting projects.

Awarded projects began implementation in summer 2021. All Grantees are eligible to receive technical assistance through contracts with the Strategic Growth Council and UC Berkeley's Othering and Belonging Institute (OBI). Additional information on these projects is included in Appendix G.

Proposed Funding Allocation

Staff recommends an allocation of $25 million for STEP.

In the FY 2019-20 STEP solicitation, the top five highest-scoring Implementation Grant proposals were all extremely competitive. However, CARB only had enough funding in STEP to fund the top two and a half Implementation Grant proposals. Staff recommends allocating $25 million to fund the third highest-scoring Implementation Grant proposal, which had previously only received a portion of the funds requested, and then fund the fourth and fifth highest-scoring Implementation Grant proposals. This investment would fund projects including, but not limited to, pedestrian infrastructure improvements, public transit safety and access improvements, urban greening, a bike resource hub, expanded bikeshare and carshare services, a new community shuttle service and related workforce development program, implementation of a truck management plan, and substantial outreach and education programs. These investments will directly address community-identified transportation needs, increasing residents' access to destinations while simultaneously reducing VMT and GHGs. The three proposals recommended for funding have embraced the importance of community involvement and have thoroughly incorporated community decision-making into their planned project implementation.

Staff recommends this approach over conducting a new solicitation this year for three primary reasons:

1. Applicants put a lot of effort and resources into the proposals that were submitted in STEP's first solicitation, and there are very competitive projects that are ready to fund now. CARB staff wants to make the most of all the work that was done, maximize the outcomes of the first solicitation, and get the funding to communities that need it as quickly as possible.
2. Not conducting a new solicitation this year will allow CARB to continue to learn from the outcomes of STEP's first solicitation and apply those lessons learned directly to future solicitations. The two and a half proposals that CARB recommends funding this year have strong and varied approaches to community decision-making, and CARB is eager to support and learn from these activities.
3. Not conducting a new solicitation this year will also allow some of the Planning Grantees to conduct community transportation needs assessments and be more prepared to apply for a STEP Implementation Grant, if that is their determined next step.

While not anticipated, if CARB ends up awarding less than $25 million for the proposals recommended for funding, staff will consider conducting a new solicitation (potentially allowing previously unsuccessful applicants to apply again) or shifting the funding to other transportation equity projects that show demand. Staff may also consider allocating a small amount of funding to continue supporting current and future Grantees. This support may include helping Grantees address outstanding challenges, such as high insurance costs, intensive data requests, and implemented projects' long-term financial sustainability.

Proposed Changes to Project Criteria

Since CARB does not plan to release a new STEP solicitation for FY 2021-22, staff is not proposing any changes to project criteria for FY 2021-22. Any changes to project criteria for future solicitations will be discussed with stakeholders in a future public process.

Project Solicitation: A competitive solicitation for FY 2019-20 STEP funds was released in June 2020. As noted above, staff has proposed that FY 2021-22 funds be awarded as part of that solicitation to fund the next most competitive project proposals received.

Project Evaluation and Outcomes

STEP funds the development and use of clean transportation modes meant to fulfill the dual goals of increasing mobility and decreasing vehicle miles traveled. Staff estimates that the $25 million allocated to STEP to fund an additional two and a half Implementation Grants would provide about 1,109 metrics tons of CO2 equivalent GHG emission reductions. This allocation would reduce NO_x emissions by 365 lbs, PM 2.5 emissions by 94 lbs, and ROG emissions by 90 lbs. This allocation would also reduce passenger auto vehicle miles traveled by 2.8 million miles, save residents almost three million dollars in travel costs, and reduce net fossil fuel use by 91,685 gasoline gallon equivalents. Appendix A provides additional details on the benefits estimates.

CARB plans to evaluate the success of STEP-funded projects via two research contracts. CARB has a contract with OBI to evaluate the success of the eight funded Planning and

Capacity Building Grants. OBI will work with each Grantee to develop an evaluation framework and community-defined metrics of success. Metrics that may be evaluated include increased understanding of residents' transportation needs, prioritization of projects according to those needs, and level of engagement with community residents – particularly hard-to-reach residents.

CARB has a contract with the University of California Berkeley's Transportation Sustainability Research Center to evaluate the success of the three funded Implementation Grants. UC Berkeley will work with each Grantee to develop an evaluation framework that is specific to their projects and their community's definition of success. The contract will evaluate whether the funded projects help meet the transportation needs of different community demographics across accessibility, affordability, environmental sustainability, reliability, and safety. Metrics that may be evaluated include mode shift away from single occupancy vehicles, number of clean transportation choices available, public health (e.g., air pollution exposure), and level of engagement with community residents—particularly hard-to-reach residents.

A socioeconomic benefit of these projects is travel cost savings. Evaluation methods consist of collecting data from the Grantees and quantifying the associated savings. Metrics include number of subsidies, value of each subsidy, and average fare of each clean transportation service. Another socioeconomic benefit of these projects is access to clean transportation options. Evaluation methods consist of collecting data from the Grantees and estimating the value of the access provided. Metrics include clean, shared vehicle miles traveled and usage of clean transportation services. Lastly, a socioeconomic benefit of these projects is workforce development. Evaluation methods consist of collecting data from the Grantees. Metrics include the number of people who complete a workforce training program.

AB 1550 Disadvantaged Community and Low-Income Household/Community Benefits: In the FY 2019-20 Funding Plan, staff proposed that all funds allocated for STEP Implementation Grants benefit disadvantaged communities. Since staff is recommending that all FY 2021-22 funds be allocated to Implementation Grant proposals from the FY 2019-20 solicitation, staff expects all of STEP's FY 2021-22 funds to benefit disadvantaged communities, as defined at the time of the FY 2019-20 solicitation.

Outreach, Technical Assistance, Needs Assessments, and Workforce Development Overview

This section covers CARB's investments in outreach and other capacity-building support efforts, including a streamlined one-stop-shop (Access Clean California), community transportation needs assessments, technical assistance, and workforce training and development. These investments are critical to ensuring the clean transportation equity projects are accessible to, and meet the needs of, the State's priority communities. These investments incorporate equity principles, such as building community awareness and capacity across clean transportation and mobility programs and leveraging existing multi-disciplinary partnerships and programs, and support implementation of the recommendations from CARB's SB 350 Guidance Document to reduce the barriers low-income residents face in accessing clean transportation and mobility options.

Outreach, Community Transportation Needs Assessments, Technical Assistance and Access Clean California

Proposed Low Carbon Transportation Allocation
$5 million

Project Goals

The goals of investments in Outreach, Community Transportation Needs Assessments, Technical Assistance and Access Clean California (formerly named the One-Stop-Shop Pilot Project) are to work with local community-based organizations and trusted community leaders to help increase awareness of clean transportation funding opportunities, build local community capacity, and streamline access to Low Carbon Transportation equity projects. These investments help to reduce barriers to participation, expand educational, training, and workforce development opportunities, and raise awareness in the most impacted and overburdened communities. Equity metrics developed through Access Clean California, will help CARB evaluate how effectively these equity outcomes are operationalized and achieved.

Current Project Status

Traditionally, Low Carbon Transportation Investment funding for outreach has been part of each individual project, such as CVRP, Clean Cars 4 All, etc., and conducted somewhat disparately by each program administrator. In the FY 2019-20 Funding Plan, however, CARB allocated a total of $7 million[39] to support a comprehensive outreach strategy centered on implementing several of CARB's SB 350 Guidance Document priority recommendations and meeting the broader clean transportation and mobility needs of community residents. Of this, CARB dedicated $1 million for additional outreach support for existing equity project administrators, and to support technical assistance and capacity building for priority populations through funding to local community-based organizations. This funding was allocated to GRID Alternatives to pilot additional capacity-building grants to CBOs representing historically overburdened communities. Currently, the grants are assisting an initial cohort of six CBOs from across the State develop fellowship opportunities, training curriculum and materials, and other capacity-building efforts to support targeted outreach in priority communities.

CARB allocated the remaining $5 million from FY 2019-20 to continue development and implementation of Access Clean California. In the FY 2017-18 Funding Plan, CARB allocated $5 million of VW settlement funding to initiate development of Access Clean California, and after a competitive solicitation in 2018 selected GRID Alternatives as the program

[39] The final funding allocation was reduced to $6 million due to reductions directed by the Department of Finance per the Budget Act of 2019, associated with lower fourth quarter Cap-and-Trade auction proceeds.

administrator. A priority recommendation of both CEC's SB 350 Low-Income Barriers Study[40] and CARB's SB 350 Guidance Document, Access Clean California is a multi-dimensional outreach project 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 the 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 projects, including Clean Cars 4 All, Financing Assistance, CVA Program, and CVRP.

Consistent with the Greenlining Institute's Six Standards for Equitable Investment, the pilot has undertaken a user-centered approach to developing the various components of Access Clean California. To date, the pilot successfully built a statewide network of outreach partners to help CARB spread the word about its clean transportation equity programs and build trust and capacity in some of the most impacted communities. In support of these partners, Access Clean California provides 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 also 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 user-centered 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[41] and is currently available for facilitated-use by the project's outreach partners with the ultimate goal of opening up for broader use after the clean vehicle purchase incentive projects receive additional funding. Via the Benefits Finder, GRID Alternatives is also piloting a centralized income verification process to inform how income verification—one of the most complicated steps in each program's application process—can be streamlined across all the connected programs. To support applicants through the entire application process, GRID Alternatives has also developed a case management system with supporting back-end software.

Looking toward FY 2021-22, CARB staff and the Access Clean California project team plans to significantly scale-up outreach implementation and expand the partner network. Access Clean California will also be working to expand the Benefits Finder to additional programs, to fulfill the ultimate vision, as outlined in the 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 California Public Utilities Commission,

[40] California Energy Commission. Low-Income Barriers Study, Part A: Overcoming Barriers to Energy Efficiency and Renewables for Low-Income Customers and Small Business Contracting Opportunities in Disadvantaged Communities. December 2016. https://efiling.energy.ca.gov/getdocument.aspx?tn=214830

[41] www.AccessCleanCA.org

CEC and other State agencies, are ongoing to determine longer-term project support via additional funding sources.

Proposed Funding Allocation

Staff recommends allocating $5 million to continue prioritizing and expanding outreach, education, and other capacity-building efforts to increase awareness and build broader understanding of community clean transportation and mobility needs. This includes Access Clean California, technical assistance and community transportation needs assessments. Staff estimates that $3-$5 million would be used to support scaling-up implementation of Access Clean California, as well as expanding additional clean transportation and energy incentive programs. The remaining funds will be used to expand or enhance outreach, technical assistance, and capacity-building efforts through funding to local community-based organizations for existing equity projects in the near-term.

Proposed Changes to Project Criteria

Staff is not proposing any significant policy changes for Access Clean California but will be working closely with GRID Alternatives to ensure that as the project scales-up in FY 2021-22 it is effectively targeting the most impacted and underinvested communities. The project will also be coordinating closely with Financing Assistance as this program transitions to a more needs-based implementation model.

Over the next year staff will evaluate communities to determine whether there is a need to develop outreach, needs assessment, technical assistance and/or other capacity building efforts that are separate from those being implemented through existing projects. For example, would a more centralized approach to needs assessments or technical assistance be more effective than continuing to fund these elements through the STEP and the CMO projects?

Solicitation: CARB held a competitive solicitation for Access Clean California (then called the One-Stop-Shop Pilot Project) administrator with funding beginning in FY 2017-18 and with the option, at CARB's discretion, for new Grant Agreements for each of the subsequent two fiscal years (FY 2018-19 and FY 2019-20). A second grant agreement was executed in February 2020 using FY 2018-19 funds. Due to the delay in California Climate Investment funding for equity projects in FY 2019-20 and because Access Clean California, along with several of CARB's other clean transportation projects, represent critical, high-priority equity efforts, staff does not want to subject Access Clean California to further delays that could negatively impact full-scale outreach implementation and participation from priority populations. Additionally, the current Access Clean California administrator, GRID Alternatives has proven to be a highly reliable and experienced administrator. As such, staff is proposing to enter into a third Grant Agreement with the existing project administrator to minimize any delays in supporting community needs in this ongoing program. In future years, if funding becomes available for additional funding windows, CARB staff would propose to hold a new competitive solicitation.

Any remaining funding not initially allocated to Access Clean California may later be added to existing grant programs conducting outreach and technical assistance, such as the Access Clean California and the clean mobility options projects, may be administered statewide through a single entity as a new "technical assistance and capacity-building" project, or a combination of both.

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 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 Investments project funds. 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.

In partnership with the Greenlining Institute, 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 communities. The data captured through these metrics will allow the program to adapt and adjust to meet the needs of its priority audience and disadvantaged communities, and also supports the Greenlining Institutes 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.

Workforce Training and Development

Proposed Low Carbon Transportation Allocation
$1.5 million

Project Goals

The goal for investment in Workforce Training and Development is to support CARB's equity goals by maximizing economic opportunities and benefits for priority populations, including expanded and increased connections to good quality clean transportation jobs, training opportunities, and career development. Investment in Workforce Training and Development projects will not only support current and future ZEV access, education, and development in priority communities, but it will also further support job training and career advancement opportunities in the communities where CARB-incentivized ZEV deployment is occurring. These investments aim to address community barriers and increase access to good quality jobs in the most impacted and overburdened communities.

Workforce training and development has been an important element of CARB's Clean Transportation Incentives and has been included in many of our existing equity projects. Workforce Training and Development has always been part of CARB's Heavy-Duty Advanced Technology Demonstration and Pilot projects and has become more formalized over time, such as in CARB's 2018 Zero and Near Zero-Emission Freight Facilities solicitation and CARB and CEC's large scale zero-emission Drayage Truck and Infrastructure Pilot Project. These large complex projects involve a broad set of community partners to help develop curriculum and to teach current and future technicians how to maintain advanced technology equipment like zero-emission heavy-duty trucks and their supporting infrastructure. Another key focus has been on electric vehicle charging infrastructure within school-focused and shared mobility projects, and in outreach and education activities. To support commercial operations of zero-emission bus (ZEB) adoption programs, several ZEB technology workforce educational curricula have been developed providing residents with new technology vehicle training and skills. Additionally, many of CARB's clean mobility investments provide training opportunities for residents, and high school and college students.

Bridging low-income and disadvantaged communities' workforce training and development needs in the light-duty and heavy-duty sectors and connecting residents to existing and future workforce training and development programs is a key focus of CARB's SB 350 Guidance Document. Workforce training and development investments build on CARB and CEC's clean transportation program lessons and equity principles, including the need to understand and fill critical gaps in access to workforce programs that provide direct community benefits, maximize investments that address community-identified needs, and prioritize and elevate community-driven ideas and solutions that support California's transition to a zero-emission future.

Current Project Status

CARB is collaborating and co-funding the new innovative Inclusive, Diverse, Equitable, Accessible, and Local (IDEAL) Zero-Emission Vehicle Workforce Pilot (ZEV Workforce Pilot) through an interagency agreement with CEC. This pilot will provide communities with direct workforce training and development opportunities across light-duty, medium-duty, and heavy-duty vehicle applications. CARB and the CEC anticipate releasing the competitive ZEV Workforce Pilot grant solicitation publicly in the third quarter of 2021. CARB is also exploring potential partnerships with other agencies, such as the California Workforce Development Board and Employment Training Panel, to further leverage existing efforts, build more partnerships, and incorporate lessons learned into future solicitations and grants. Other existing Clean Transportation Incentives projects that have a workforce and development component include the Rural School Bus Pilot Project and CMIS. Specifically, the CMIS project directly impacts students, staff, and teachers through curriculum development, and workforce training, including a Clean Energy Fellow to provide priority populations with direct training opportunities in the clean transportation sector in their communities. Located within disadvantaged communities, grantees will develop both educational outreach forums to residents as well as curriculum in partnership with University of California professors, Rio Hondo Community College, zero-emission technology manufacturers, and community-based organizations on a variety of CMIS project elements. Both the Rural School Bus Pilot Project and CMIS grants are investing in local community education and workforce training.

CMO and STEP also provide funding for several projects that involve workforce training and career development opportunities for local residents. CMO provides opportunities mostly focused on electric vehicle education, installation and maintenance of charging infrastructure and solar equipment, marketing, outreach and education activities such as working with local students to serve as ambassadors to engage community members and expand education and awareness opportunities. STEP funds several workforce development projects in which workforce training and development is an important element of the projects and encouraged from the beginning. Most STEP projects are focused on either electric vehicle charging infrastructure and shared mobility projects, or on outreach and education activities, and many provide training opportunities for high school and college-aged youth.

Other important players supporting workforce development and training include some pioneer ZEB-adopting transit agencies, such as Sunline Transit Agency and Alameda-Contra Costa Transit District. They have been key ZEB technology educators and have developed curricula and workforce training programs to support the commercial operation of ZEBs. These training programs ensure advanced skillsets are taught to operate and maintain zero-emission battery and hydrogen fuel cell buses.

In working with stakeholders and communities and developing approaches for meeting zero-emission and air quality mandates, workforce development has been elevated as a critical priority for investment. CARB plans to continue bolstering workforce elements of existing programs to support the clean transportation sector and funding additional workforce training and career development projects in the future. This includes providing

economic opportunities through high-quality jobs and collaborating with workforce development and training programs to create career pathways for residents.

Proposed Funding Allocation

Staff recommends this new allocation of $1.5 million be used to further support job training and career development for priority populations in two areas: 1) expand zero-emission vehicle dealership training; and 2) establish partnerships with adult education and vocational schools. This would include light-duty vehicle dealerships as well as exploring potential heavy-duty manufacturing and dealership opportunities for transit and school buses, and expanding workforce development program offerings in adult education and vocational schools. This is directly responsive to stakeholder feedback CARB received during the July 27, 2021 Workforce Training and Development public work group meeting, and will be done in close coordination with our sister agencies such as, the California Energy Commission, the California Workforce Development Board, and the Employment Training Panel.

In parallel with this investment, CARB will explore opportunities for strengthening workforce equity principles in future clean mobility grants and solicitations, consistent with SB 350 goals. This will include refining grant and solicitation guidance currently being developed to address CARB's SB 350 Guidance Document recommendations to include more specific workforce training and development requirements for clean mobility investments, such as requiring local hiring. CARB will also continue to prioritize the selection of incentive projects that provide residents with or create connections to good quality clean transportation jobs, training opportunities, and workforce development programs in priority communities.

With this allocation, CARB can expand clean transportation workforce training and development efforts, beyond the current IDEAL investment, to further address stakeholder identified gaps and maximize opportunities for priority populations. CARB plans to hold additional work group meetings to identify and develop specific project implementation criteria after the Funding Plan is approved by the Board later this year.

Proposed Changes to Project Criteria

CARB is proposing to prioritize funding workforce training and development that supports clean mobility equity projects, and that align with existing training opportunities that seek to advance adoption of new zero-emission vehicle technologies and related career opportunities.

Project Solicitation: With the $1.5 million in funding CARB plans to leverage partnerships with other agencies and existing training programs and efforts identified in communities through interagency agreements. If no interagency or leverage opportunities are identified, CARB may develop a new solicitation.

Project Evaluation and Outcomes

This project will be designed to increase and expand priority populations' access to workforce training and development programs and to maximize the economic opportunities

and the benefits for priority communities by prioritizing the implementation of incentive projects that provide residents with connections to good quality clean transportation jobs, training opportunities, and workforce development. Because this is a support and enabling project, CARB staff is not quantifying any direct emission reductions for this funding. However, CARB staff anticipates measuring the success of this project over time. CARB will report the outcomes of this project in future Funding Plans. Staff proposes to use metrics such as jobs, job training sessions, and networking workshops, as well as capacity building metrics, such as the increase in workforce training and development in priority populations. CARB will also require clean transportation program administrators to develop surveys of participants to determine how effective the project is in leading to good quality jobs and determine whether refinements are needed. 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. 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.

AB 1550 Disadvantaged Community and Low-Income Household/Community Benefits: This project is intended to expand and increase priority population residents' 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. Staff is estimating that all of the proposed $1.5 million will directly benefit priority populations through opening up and expanding workforce training and development opportunities.

Chapter 4: Heavy-Duty Vehicle and Off-Road Equipment Investments

Overview

The pace of heavy-duty technology advancement has increased rapidly over the past several years, resulting in more commercially available zero-emission vehicle and equipment options than ever before. And several new advancements are emerging to expand technology options and reach new market segments, supporting the transformation of the on-road and off-road fleet to zero-emission wherever feasible to help meet California's ambitious air quality and climate change goals.

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 provides 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 before providing preliminary funding recommendations for and descriptions of the following projects:

- Advanced Technology Heavy-Duty Demonstration and Pilot Projects
- Clean Truck and Bus Voucher Incentive Project (HVIP)
- Clean Off-Road Equipment Vouchers Incentives Project (CORE)
- The Truck Loan Assistance Program

CARB's strategy for heavy-duty investments maximizes benefits and enables progress toward State climate change and air quality goals, while ensuring that investments benefit the communities most impacted by poor air quality. This is an important time to invest in heavy-duty applications for technology development, market transformation, and economic recovery.

Supporting Zero-Emission Market Development

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, including battery-electric Class 8 trucks and battery and fuel cell buses. 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 residents experience improved air quality and have access to incentive programs.
- Supporting high-quality jobs.

- Enhancing California's leadership role as an incubator and marketplace for clean, zero-emission technology.

Executive Order N-79-20[42] sets near-term and longer-term targets to meet these objectives: 100 percent of medium- and heavy-duty vehicles in the state be zero-emission by 2045 for all operations where feasible, and all drayage trucks be zero-emission by 2035. 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. The *California Zero-Emission Vehicle Market Development Strategy*[43] 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.

CARB recognizes the challenges and opportunities associated with larger scale deployments, where multiple vehicles are deployed at one location. Fleet refueling/charging and vehicle operation and maintenance needs must be met for a successful zero-emission fleet deployment. CARB will continue to collaborate with CEC and other agencies on large-scale vehicle/infrastructure projects to share lessons learned with scaling up deployments of battery-electric and hydrogen fuel cell fleets.

Continuing to invest in technology demonstrations will be critical to develop and advance zero-emission technology in challenging sectors, such as rail, marine, port, construction, and agriculture. Commercializing new technologies and transfer to new applications supports immediate emission reductions during the demonstration phase and enables longer term emissions reductions needed in the communities most impacted by poor air quality. It is also important to identify opportunities to build on the progress made in earlier demonstrations to help further their advancement towards commercialization.

The Climate Change Scoping Plan, Sustainable Freight Action Plan, and Mobile Source Strategy all demonstrate that meeting the State's air quality, climate, and equity goals will require robust zero-emission markets for an array of heavy-duty applications. And ensuring that communities most impacted by poor air quality reap the benefits will require active and meaningful community engagement. Acknowledging that these benefits will not materialize soon enough on their own, California is investing in their realization with incentives and complementary regulatory measures.

As costs continue to decline and technologies expand, incentives will phase out of some markets as they mature or refocus on priority fleets. Regulations that require cleaner vehicle technologies provide long-term market certainty and continue 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:

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[42] Executive Order N-79-20, September 23, 2020. https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf

[43] 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.

- 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
- Upcoming Advanced Clean Fleets and Zero-Emission Forklifts regulations

Proposed Allocations

For FY 2021-22, the State budget included a total of $345 million for heavy-duty vehicle and off-road equipment projects from the Greenhouse Gas Reduction Fund for Low Carbon Transportation, which is augmented by $413 million from the General Fund, and $86.45 million from the Air Pollution Control Fund. Additionally, $28.64 million in AQIP funds were appropriated to CARB through the Budget Act of 2021. Following the Budget Act of 2021, staff's proposed FY 2021-22 allocations are shown in Table 13.

Table 13: Proposed FY 2021-22 Heavy-Duty Vehicle and Off-Road Equipment Project Allocations (Millions)

Project Category	Low Carbon Transportation	General Fund*	APCF	AQIP	Total Allocation
Clean Truck and Bus Vouchers (HVIP)	**$196.5**	**$373**			**$569.5**
HVIP Standard	*$171.5*	*$98*			*$269.5*
HVIP–Transit		*$70*			*$70*
HVIP–School Buses		*$130*			*$130*
HVIP–Drayage		*$75*			*$75*
HVIP–Innovative Small e-Fleets	*$25*				*$25*
Clean Off-Road Equipment Vouchers (CORE)	**$108.5****		**$86.45**		**$194.95**
Demonstration & Pilot Projects	**$40**	**$40**			**$80**
Drayage Truck and Infrastructure Pilot		*$40*			*$40*
New Demonstration and Pilot Projects	*$40*				*$40*
Truck Loan Assistance Program				**$28.64**	**$28.64**
Total	**$345**	**$413**	**$86.45**	**$28.64**	**$873.09**

**Does not include any adjustments for project administration.*
*** This allocation includes $30 million of dedicated funds appropriated by the Legislature in SB 170 to provide incentives for professional landscaping services in California operated by small businesses or sole proprietors to purchase zero-emission small off-road equipment.*

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 as part of the FY 2017-18 Funding Plan. It was designed to serve as a 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 updates the 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 for accomplishing this. The result of the process was the Three-Year Investment Strategy for Heavy-Duty Vehicles and Off-Road Equipment.

The document, now renamed Long-Term Heavy-Duty Investment Strategy (The Strategy), includes three main components: technology status snapshots to show progress to date toward commercialization; beachheads for the advanced technology pathways (zero-emission capable and cleanest combustion) that describe 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 commercialization and market transformation goals.

Each year has seen dramatic changes taking place in the market along with a number of economic uncertainties. The Strategy provides a focus to help guide the resources that are available to where they can help to make the most progress towards meeting the State's long-term air quality, climate, and equity goals. As in prior years, staff has updated the core components of the Strategy that are integral to its mission and purpose. Below is a summary of key updates included in this year's Strategy, which can be found in full in Appendix D of this Funding Plan.

Technology Status Snapshots

Technology has been advancing 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. Understanding where key technologies are on their path to commercialization better enables CARB staff to make appropriate funding considerations. As such, this year's Long-Term Heavy-Duty Investment Strategy includes an annual update to the status of these core technologies and applications.

Technology Pathway Beachheads

One of the primary organizing concepts for the Heavy-Duty Investment Strategy is the targeting of Low Carbon Transportation and AQIP investments around strategic "beachheads"–particular applications of a technology that have the strong potential to transfer and spread to broader applications. From these initial first-success applications,

next-generation vehicle applications can further expand through the extension of these technologies to adjacent markets through the leveraging and adoption of similar powertrains; growth of supply chain volumes for common components; expansion of fueling infrastructure; and confidence in performance and business cases.

With the ongoing advancement of off-road technologies and the emergence of promising new applications, CARB has continued to integrate off-road technologies into the beachhead models and the Long-Term Heavy-Duty Investment Strategy more broadly. CARB has worked with stakeholders to understand the connections between on- and off-road applications and has updated the beachheads accordingly. These updates better enable CARB to invest appropriately in both on- and off-road applications and to accelerate technology commercialization for the entire heavy-duty sector.

Three-Year Investment Priorities Table

Many of the key findings of the Long-Term Heavy-Duty Investment Strategy are captured in the three-year investment priorities table, which contains CARB's top priorities for the upcoming three fiscal years (not including the current year) for Low Carbon Transportation funds. As in prior years, staff has added a new third year (FY 2024-25) to the table along with draft funding levels for technologies in the demonstration, pilot, and commercial incentive categories. Small changes have been made to the other years to recognize shifts in technology, current projects receiving State investment, and the resulting impacts to investment priorities.

Other Updates

- **Metrics of Success:** Each year, the heavy-duty investment strategy continues to build on the three broad categories that broadly define success: creating healthy communities; growing the green economy; and supporting technology evolution. CARB worked with stakeholders to develop a set of metrics—using data already being collected—to construct a holistic set of evaluation tools. These include measures such as clean vehicle miles traveled, investments in California's disadvantaged communities, 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. For this year's Strategy, these metrics have been updated, and a few new metrics, including those that are designed to support equity goals, have been added.
- **Equity:** Equity has been an important consideration with the development of each year's update, and the update for FY 2021-22 seeks to examine the heavy-duty investment strategy more broadly through the lens of equity. In addition to considering how heavy-duty investments can benefit priority populations, CARB continues to work with stakeholders, developing a coordinated approach across light-duty and heavy-duty investments, to identify other metrics that can help to demonstrate the benefits and co-benefits of incentive funding.
- **Industry Examples:** As has been the case in prior years, CARB is including 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 transit, hydrogen fuel cell technologies, job creation, technology transfer to off-road applications, and the important role of small businesses in advancing clean vehicle technologies.

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 24,100 school buses operating in California approximately 53 percent are diesel. Nearly 90 percent of the state school bus inventory is either non-diesel fueled or is compliant with CARB's Truck and Bus Regulation.

Since last year's update the State has spent or allocated approximately $110 million to school bus cleanup, with an additional $150 million in new funding dedicated to school buses in the current fiscal year. The new funding approved by the Legislature for the FY 2021-2022 budget will help the State make significant progress in turning over old school buses in rural areas. Turnover of all publicly owned school buses over by 2045 at a rate of four percent turnover per year would require an investment of up to $260 million annually (not including infrastructure costs, total cost of ownership savings, or additional training/support). California school districts continue to need more funding and support each year to continue to build on past successes.

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

Project Goals

Demonstration projects are intended to accelerate the introduction of advanced emission reducing technologies that are on the cusp of commercialization into the California marketplace. In this first phase of CARB investments, pushing technology advancement toward commercialization, per-vehicle or equipment incentives are high because manufacturing is not standardized and is focused on developing and testing technologies in real-world applications. Higher levels of incentives per vehicle are needed to help companies offset the costs of technology development, deployment, and supporting infrastructure installations. The State's investment in demonstration and pilot projects encourages industry to expeditiously invent, develop, test, and introduce cutting edge emission reducing technologies in the on- and off-road sectors. All demonstration 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 benefitting 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. Two successful examples of this are CARB's support for zero-emission school buses in 2012 and zero-emission yard trucks in 2013. Currently, both electric school buses and yard trucks are fully commercialized by a diverse number of manufacturers, realizing lower operational costs for their end users and providing needed emission benefits to California's impacted communities.

Current Project Status

Over the past six years, CARB has funded over 30 heavy-duty demonstration and pilot projects with approximately $400 million in incentives paired with an equal if not larger sum contributed by the hundreds of implementing project partners, including many California businesses utilizing these technologies every day. Demonstration projects include over a hundred clean heavy-duty trucks and cargo handling equipment, energy management systems, an opposed piston line-haul truck engine, electric agriculture tractors, and a hydrogen fuel cell passenger ferry. Pilot projects include battery electric and fuel cell transit buses, electric school buses, battery electric delivery trucks and super clean marine vessels. In addition, CARB's Zero- and Near Zero-Emission Freight Facilities project funded ten transformational projects demonstrating a wide range of advanced technology vehicles and equipment around the State at significant scale. The projects occur throughout California from San Diego to the South Coast area, through the San Joaquin Valley up to Sacramento and the Bay Area. Detailed summaries of all of CARB's heavy-duty demonstration and pilot

projects funded to date can be found on the Moving California website and in Appendix G.[44] Additionally, in November 2020, CARB and the CEC issued a joint solicitation for the Zero-Emission Drayage Truck and Infrastructure Pilot program. This solicitation was so successful that funding was included in the FY 2021-22 State budget to fund the remaining eligible applications from this opportunity.

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 three years to help put the State on a trajectory to meet its ZEV adoption and emission reduction goals. The total funding need for demonstration and pilots projected for FY 2021-22 ranges from $250-$415 million. Of the $745 million appropriated to CARB for heavy-duty investments, $40 million was legislatively directed to fully fund all eligible applications that were received through the joint solicitation with the CEC. Staff is proposing that an additional $40 million will be directed to support other demonstration and pilot projects.

$40 million from General Fund for the Zero-Emission Drayage Truck and Infrastructure Pilot Project:

CARB and CEC released a joint $44.1 million FY 2019-20 Zero-Emission Drayage Truck and Infrastructure Pilot Project solicitation in November 2020 to support large scale deployments of zero-emission regional haul and drayage trucks. Seven applications were submitted, requesting $152 million in funding, with a proposed $200 million in match funding, representing nearly $350 million in total project costs. The initial $44.1 million allowed only one of the eligible projects to be fully funded, and partial funding for a second project. The $40 million additional allocation will provide funding for all eligible projects resulting from the joint CARB and CEC solicitation.

$40 Million in Greenhouse Gas Reduction Funds for Low Carbon Transportation funds for Off-Road Advanced Technology Demonstration and Pilot Projects:

Staff is proposing to primarily focus on off-road demonstration and pilot projects with this year's funding. Staff is not proposing a specific allocation for each project, but rather to allow all project categories to compete for the available funding. Maximum project awards or other means of ensuring a diverse set of projects are selected could be employed. Specific mechanisms for funding allocations and other concepts will be discussed at public work group meetings after Board approval of the Funding Plan. Proposed project categories eligible for funding are:

- **Municipal 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 breaking down barriers for adoption

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

through activities such as streamlining city permitting for charging equipment and determining what systems need to be in place for a municipality to foster widespread zero-emission technology adoption. Projects should encourage other cities to adopt Green Zone polices within their jurisdiction based on project outcomes. Projects could include 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.

- **Resilient Zero-Emission Vessel Charging Project:**
  - Focus on deploying on-site renewable power generation to provide renewable charging or refueling for zero-emission capable commercial harbor craft.
- **Modular Zero-Emission Capable Cargo Handling Equipment Demonstration:**
  - Build and deploy zero-emission cargo handling equipment, such as container handling or bulk equipment, or other off-road equipment that would be designed with modular powertrains and energy systems to facilitate the transition to full zero-emission operations as technology evolves.
- **Emission Reductions from Ocean Going Vessels:**
  - Funding to demonstrate the feasibility of hydrogen fuel cells to replace auxiliary engine operations on an ocean-going vessel while at berth or anchor.
  - Demonstrate a hydrogen fuel cell or other low carbon technology to power a shore power barge which could be used to provide shore power to berths without such equipment or to shore power capable vessels at anchor.
  - Barge mounted capture and control systems for ocean going vessels at berth or anchor.
- **Zero-Emission Intrastate Line Haul Locomotive:**
  - Demonstrate a zero-emission locomotive that can operate in intrastate line haul operations such as a port-railyard route without requiring additional diesel locomotives in the consist.

For projects focused on infrastructure, like the Resilient Zero-Emission Vessel Charging Project, CARB will coordinate and collaborate with the CEC.

Proposed Changes to Project Criteria

Staff proposes utilizing a third-party administrator to act as CARB's Project Liaison to implement Low Carbon Transportation funded projects. A single combined solicitation may be issued for all project applications in lieu of several category specific solicitations. The combined solicitation may also include provisions to solicit the third-party administrator, unless CARB determines that a separate administrator solicitation is warranted.

Any agreement with a third-party administrator is intended to be a multi-year agreement that may allow for the third-party administrator to continue their support for CARB Advanced Technology Demonstration and Pilot projects. Specific details about the roles and responsibilities of the third-party administrator and the solicitation format will be developed, with stakeholder input, through the public work group process.

Staff is proposing to include specific workforce training and development components for future solicitations. Detailed information on jobs created or retained by funded projects along with salary levels, education requirements, internships and other information will be collected.

Project Solicitations: Staff proposes that Advanced Technology Demonstration and Pilot Projects utilize a competitive process where only 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.

Should a competitive process be used to solicit for a third-party administrator, staff proposes that any entity with relevant experience should be eligible to apply to be the third-party administrator whether they are a public agency, non-profit or for-profit entity.

If an Interagency Agreement with another state agency or state university is determined to be the best course of action for the third-party administrator, a competitive process to determine the third-party administrator may not be needed.

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. Based on the applications received in the joint solicitation, the additional $40 million proposed allocation to the drayage truck pilots are estimated to achieve 39,760 metric tons of CO2 equivalent, 11.34 tons of NOx, 0.49 tons of PM 2.5, and 0.59 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 success of any Advanced Technology Demonstration and Pilot Project will include:

- **Successful deployments of vehicles and equipment along with supporting infrastructure.** This metric is evaluated by comparing the proposed 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 an Advanced Technology Demonstration and 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 100 percent of the funding for Advanced Technology Demonstration and Pilot Projects be in or benefitting a disadvantaged community.

Clean Truck and Bus Vouchers (HVIP)

Proposed Low Carbon Transportation Allocation–$196.5 million
Proposed General Fund Allocation–$373 million

Project Goals

The Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) continues to accelerate market transformation by reducing the purchase price 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 zero-emission vehicles in the heavy-duty market, as well as supporting investments in other emerging technologies to achieve substantial greenhouse gas 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 most impacted communities. 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 in most cases.

Last year, staff worked with stakeholders to better define and memorialize the program's guiding principles and implemented program policy changes to address an unprecedented fiscal crisis. As funding opportunities have resumed, staff continues to recognize the importance of equity in incentive opportunities. Staff is proposing to add additional language to the guiding principles that reflect opportunities to advance equity.

HVIP is a unique project in the CARB portfolio. As the only incentives project that exclusively supports on-road advanced technologies with early market challenges, it provides the bridge between demonstrations and pilots to the scrap and replace programs. 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. The Carl Moyer Memorial Air Quality Standards Program, Community Air Protection Incentive Funds, Volkswagen Environmental Mitigation Trust, Truck Loan Assistance Program, and FARMER Program all provide funding for heavy-duty vehicles adopting clean technology but have their own program goals such as achieving cost-effective emission reductions or meeting the needs of specific communities.

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 recommended HVIP funding policies 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 technology.

HVIP will continue to provide benefits to AB 1550 disadvantaged and low-income communities. Most HVIP funding is implemented on a first-come, first-served, statewide basis, so it is not possible to estimate in advance exactly how much funding will benefit

priority populations. To date, over 60 percent of awarded HVIP funding has benefited priority populations.[45]

Current Project Status

Since its inception in 2010, HVIP has supported the purchase of over 3,000 zero-emission trucks and buses, 2,500 hybrid trucks, 2,500 natural gas combustion engines, and 230 trucks with electric power take off systems (ePTOs) by California fleets through August 2021. With more zero-emission Class 8 trucks now commercially available and the continued development of additional product lines, the diversity of available models has increased substantially.

After being closed to new voucher requests for over 18 months, HVIP opened again in June 2021 with approximately $170 million in total funding available, including $25 million approved in the Fiscal Year 2020-21 Funding Plan and the remainder from previously cancelled vouchers. This funding was quickly exhausted, providing funding for 1,250 trucks and buses including approximately 220 zero-emission drayage trucks, 330 zero-emission school buses, and 200 zero-emission transit buses as shown in the Table 14 below.

Table 14: 2021 HVIP Reopening Voucher Demand

Type of Vehicle	Number of Vouchers	Total Funding
Zero-Emission Drayage	220	$36 million
Zero-Emission School Buses	330	$53 million
Zero-Emission Transit	200	$27 million
Other Vehicles	500	$54 million

Consistent with the contingency provisions approved in the Fiscal Year 2020-21 Funding Plan, an additional $60 million early allocation will provide funding in the final quarter of 2021, helping to support ongoing HVIP demand until additional funding recommended in this chapter would become available in early 2022.

HVIP is also supporting the goals of Project 800. CARB launched the Project 800 initiative in January 2021, with the goal of supporting incentives for at least 800 zero-emission drayage truck orders in 2021. The initiative is intended to jump start the deployment of zero-emission

[45] California Air Resource Board. *California Climate Investments: 2021 Mid-Year Data Update*. August 2021. http://ww2.arb.ca.gov/sites/default/files/cap-and-trade/auctionproceeds/cci_2021mydu_cumulativeoutcomessummarytable.pdf.

trucks serving California ports, and provide benefits in California's most impacted communities. HVIP is a key incentive program to help meet this initial goal, along with funding from other local, state, and federal partners. As of August 2021, about 500 trucks have been ordered and staff anticipates achieving the goal of 800 orders by the end of 2021.

HVIP and CVRP staff continue to coordinate to identify incentive opportunities for smaller trucks and vans in the Class 2b weight category. As described in the current approved Funding Plan, HVIP will remain exclusively for vehicles designed for commercial purposes, and CVRP will support vehicles with a significant personal use market share (such as pick-up trucks), subject to all other CVRP eligibility criteria including MSRP caps. Staff continues to work with manufacturers to identify upcoming vehicle offerings and appropriate incentive opportunities.

HVIP Guiding Principles

HVIP guiding principles were approved in the FY 2020-21 Funding Plan and will carry forward in each subsequent funding plan. They are designed to not be strictly interpreted, but rather reflect foundational values that would be factored into decision making. This year's principles have been expanded to support smaller fleets that are facing economic, racial, cultural, and other challenges. The expanded HVIP guiding principles are listed below:

- 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.

Proposed Funding Allocation

With new zero-emission technologies coming to market, HVIP has seen continued growth and demand. Staff recommends allocating $196.5 million of FY 2021-22 Low Carbon Transportation Investments, and $373 million from the General Fund appropriation to HVIP. This includes $275 million for the first year of a three year funding allocation to support the deployment of 1,000 zero-emission drayage trucks, 1,000 zero-emission transit buses, and 1,000 zero-emission school buses as described in the State budget. The total proposed HVIP allocation is $569.5 million. Note that in addition to the HVIP funding proposed here, an additional $40 million is allocated in this Funding Plan to support zero-emission drayage trucks from the joint CARB and CEC Zero-Emission Drayage Truck and Infrastructure Pilot Project solicitation.

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 benefits of limited funding and ensure that those

fleets in greater need of support have access to incentives. Staff proposes the following changes:

- **Equity and Small Business Considerations:** Staff continue to evaluate opportunities to support the unique needs of small fleets and owner-operators. Several of the proposed changes in this section are intended to advance these considerations, including fleet size limits, a new Innovative Small e-Fleets Pilot project, and improvements to the disadvantaged community voucher enhancements.
- **Support Future CARB Regulations:** CARB's planning, regulatory, and funding policy documents emphasize the importance of coordinated incentives and regulations for a cohesive and effective air quality and climate change strategy. Some basic principles of the incentive-regulatory interface are straightforward—incentives should not be used to pay for compliance, for example. Others are more nuanced. Recently adopted heavy-duty zero-emission regulations and more on the horizon will drive faster deployment of zero-emission technologies, making HVIP's technology preparation and market transformation goals even more important. Staff began a discussion with stakeholders last year on concepts that HVIP can consider to support CARB regulations, such as focusing on incentives that are early or extra relative to regulatory deadlines. This year, staff recommends specific policy changes as described below.
- **Fleet Size Limits:** Staff recommends adding limits to the fleet size eligible to participate in HVIP, helping to direct limited funding to fleets with fewer resources. Limits would be implemented over time, allowing opportunities for larger fleets for a limited time since early adopters tend to be larger fleets, and many of those procurements are already in the infrastructure planning phase. Staff recommends that beginning on January 1, 2023, private fleets with more than a total of 100 trucks and buses no longer be eligible for HVIP incentives. This limit would be reduced to 50 trucks and buses beginning on January 1, 2024. Public agencies, including public transit and public school districts, public utilities, municipalities, and California Native American tribal governments would not be subject to any fleet size limits. Zero-emission fuel cell trucks and buses would not be subject to fleet size limits until they achieve greater market penetration.
- **Voucher Request Caps:** The existing voucher request cap is 30 vouchers per year per fleet, and 50 vouchers per year for drayage fleets. Staff proposes to add flexibility to these caps by allowing any redeemed vouchers that were requested in the same year (representing delivered vehicles) to be exempt from the voucher cap. For example, if a fleet submits voucher requests in early 2022 for 30 trucks, and the truck manufacturer delivers 20 of those trucks in fall 2022, the fleet could request another 20 vouchers before the end of 2022. This flexibility is intended to encourage timely truck and bus deliveries, while still providing opportunities for more fleets to participate.
- **ZEPCert Requirement:** As HVIP continues to support greater market penetration from heavy-duty zero-emission vehicles, staff recommends a requirement for Zero-Emission Powertrain Certification (ZEPCert) for all applicable trucks and buses, transitioning

from an optional certification to a requirement for HVIP vehicle eligibility. ZEPCert is a newer certification pathway administered by CARB for heavy-duty electric vehicles that helps support end-user fleets, ensures information regarding such vehicles and their powertrains are effectively and consistently communicated to purchasers, and accelerates progress towards greater vehicle repairability. Staff recommends implementing the ZEPCert requirement for new HVIP vehicle eligibility applications submitted to CARB on or after January 1, 2023. Staff anticipates this timeline will provide sufficient opportunity for manufacturers to prepare for meeting the additional requirements associated with ZEPCert.

- **Public Transit Bus Set-Aside:** The California State budget includes the first installment of incentive funding to deploy 1,000 zero-emission transit buses in California. The FY 2021-22 State budget appropriates $70 million to CARB for zero-emission transit bus incentives. This vehicle funding will be implemented through HVIP, and will be complemented by additional funding for infrastructure to be administered by CEC. These funds will assist public transit fleets, including those who were initially on a diesel compliance pathway for the Innovative Clean Transit Regulation, to purchase zero-emission buses. Once the set-aside is depleted, HVIP will continue to allow standard HVIP voucher requests for all public transit bus fleets pending funding availability.

- **Public School Bus Set-Aside:** Staff recommends that the Rural School Bus Pilot Project now be administered as an ongoing set-aside within HVIP. The approved State budget includes funding to support incentives to deploy 1,000 zero-emission school buses in California. This includes a three-year budget allocation of $400 million to CARB for school bus incentives, with a first-year appropriation of $130 million. The $130 million HVIP set-aside funding would be exclusively for California public school bus fleets purchasing zero-emission school buses and is anticipated to cover most of the cost of the school bus. CARB and CEC are coordinating to ensure that infrastructure funding is available for these buses.

  Some Rural School Bus Pilot Project requirements will migrate to the HVIP set-aside funding, including prioritization of rural areas and scrappage of an older school bus. Set-aside voucher amounts will be established separately from traditional HVIP school bus vouchers and may be based on manufacturer suggested retail price, bus type, and/or weight class. Voucher amounts and other eligibility criteria will be established after public input at a work group meeting anticipated in early 2022. Public school bus vouchers are not subject to fleet size caps. HVIP will continue to allow standard HVIP voucher requests for any school buses not eligible for the set-aside, and for all zero-emission school buses if set-aside funding is exhausted, subject to funding availability.

- **Drayage Truck Set-Aside:** The State budget identifies a total of $220 million to support incentives to deploy 1,000 zero-emission drayage trucks in California over the next three fiscal years. As the first installment of this proposal, the FY 2021-22 State budget appropriated $75 million to CARB for zero-emission drayage truck incentives.

This vehicle funding will be implemented through HVIP, and will be complemented by additional funding for infrastructure to be administered by the CEC. Eligibility is limited to HVIP-eligible Class 8 trucks purchased by fleets and owner-operators that are currently operating in drayage service. Staff recommends extending the $150,000 base voucher amount for Class 8 drayage truck early adopters through December 31, 2022. This funding will provide the additional resources needed to build on the momentum of the Project 800 initiative to support orders for at least 800 zero-emission drayage trucks in 2021, and continue supporting equitable access to zero-emission options for more fleets.

- **Innovative Small e-Fleets:** Staff proposes to add an Innovative Small e-Fleets set-aside to HVIP which would provide $25 million of pilot funding for incentives geared towards small trucking fleets and independent owner operators. Adding Innovative Small e-Fleets to HVIP allows CARB to implement new and innovative mechanisms including, but not limited to: flexible leases, peer to peer truck sharing, truck as a service, assistance with infrastructure, individual owner planning assistance, as well as other mechanisms. Small fleets, owner operators, and fleets served by the Truck Loan Assistance Program have faced unique challenges transitioning to zero-emission trucks such as: understanding technology options, high upfront costs, projecting operating cost savings from reduced fuel and maintenance expenses, and access to infrastructure. By dedicating 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 trucks. Staff anticipates that while many of these new mechanisms have not yet been successfully demonstrated to deploy zero-emission trucks, lessons learned from this modest pilot project investment will help to shape HVIP policy in future years.

- **Improvements to Disadvantaged Community Voucher Enhancements:** Staff evaluated revisions to improve the effectiveness of the existing disadvantaged community voucher enhancement for vehicles domiciled in disadvantaged communities. Currently, vehicles domiciled in a disadvantaged community are eligible for a 10 percent voucher enhancement (10 percent more than the base voucher amount).

  Staff proposes to add eligibility criteria to focus on fleets with significant financial burdens. Staff recommends that the existing disadvantaged community voucher enhancement be replaced with a higher 15 percent voucher enhancement for vehicles domiciled in a disadvantaged community that are purchased or leased by any public or private small fleet with 10 or fewer trucks or buses, and less than $50 million in annual revenue for private fleets. The voucher enhancement would also be available for any HVIP-eligible vehicle purchase or lease by a California Native American tribal government, subject to all other eligibility requirements described in the HVIP Implementation Manual. Additionally, HVIP-eligible manufacturers may be asked, as a condition of eligibility, to describe the outreach, workforce development, and community engagement efforts they are undertaking in low-income and disadvantaged communities.

- **Funding Shortfall Provisions:** Because of the proposed changes limiting participation for larger fleets in the future, large fleets could request a significant amount of funding in the year ahead, potentially leading to funding shortfalls. To ensure that small fleets have an opportunity for funding, staff proposes to reserve a minimum of $25 million of traditional HVIP funds (exclusive of set-asides) for fleets of 10 or fewer trucks and buses until the third quarter of 2022. After October 1, 2022, any remaining funding from the $25 million reserve would be available to fleets of any size. In addition, if funding is anticipated to be exhausted before future funding is available, staff proposes to continue the option to implement a random selection process or lottery for existing and/or new HVIP voucher requests.

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/

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. To help ensure that new funding supports economic recovery and to minimize potential funding gaps, CARB will continue to implement HVIP with the existing grantee and will not issue a new solicitation for FY 2021-22.

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, technology evolution and ensuring that advanced technology will be commercially available at the scale to meet California's long-term goals remain the primary objectives of HVIP. Staff continues to work with stakeholders to develop metrics that can be used to quantify HVIP's progress towards these goals.

While not the primary goal, HVIP does produce emission reductions. Staff expects to fund about 3,963 zero-emission and near-zero-emission vouchers, providing an estimated 230,310 metric tons of CO2 equivalent GHG emission reductions. Staff also estimates about 320 tons of NOx, 9.12 tons of PM 2.5, and 4.59 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.

HVIP staff has developed a new Fleet Survey that focuses on various user experiences including factors that influenced the purchase decision. Moreover, HVIP may consider 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. In the 2020 reporting cycle, about 63 percent of HVIP funding was spent in disadvantaged communities and an additional 10 percent in low-income communities that don't overlap with disadvantaged communities as reported in the April 2021 Annual Report to the Legislature on California Climate Investments Using Cap-and-Trade auction proceeds.

Currently, a higher HVIP incentive is offered for zero-emission vehicles domiciled and operating in disadvantaged communities, and staff is proposing changes to improve the effectiveness of this voucher enhancement. 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–$108.5 million[46]
Proposed Air Pollution Control Fund Allocation–$86.5 million

Project Goals

The Clean Off-Road Equipment Voucher Incentive Project (CORE) is intended to accelerate deployment of advanced technology in the off-road sector by providing a streamlined way for fleets to access funding that helps offset 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 in support of 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.

Current Project Status

CORE received an initial allocation of $40 million from FY 2017-18 funds and was subsequently allocated an additional $4.6 million from FY 2018-19 funds. It established a first-come, first-served voucher program for zero-emission off-road freight equipment that launched in February 2020. Over 300 vouchers have been issued since inception, totaling approximately $41 million. Approximately 75 percent of CORE-funded equipment has or will benefit priority populations ($32.2 million). CORE stopped accepting new voucher requests in August 2020, but not before generating a waitlist of nearly $44 million (i.e., greater than 100 percent oversubscribed). Program reopening is pending a new funding allocation.

A total of 13 manufacturers currently have eligible equipment models, including terminal tractors, forklifts, transport refrigeration units, mobile power units, forklifts, and railcar movers. Altogether, there are 57 different eligible equipment model configurations.

CORE Guiding Principles

Changing markets, evolving needs, and limited resources are driving tough decisions on project priorities. Guiding principles direct an organization or program throughout its life, irrespective of changes in its strategies, circumstances, or abilities. They are designed to not be strictly interpreted, but rather reflect foundational values that would be factored in decision-making. The original guiding principles for AQIP were described in the FY 2009-10 Funding Plan and were the basis for the guiding principles approved specifically for HVIP starting in the FY 2020-21 Funding Plan. Given that CORE has received additional funding in

[46] This allocation includes $30 million of dedicated funds appropriated by the Legislature in SB 170 to provide incentives for professional landscaping services in California operated by small businesses or sole proprietors to purchase zero-emission small off-road equipment.

FY 2021-22 and could potentially receive more funding in the future, staff is proposing to establish guiding principles, which mirror HVIP for CORE, as applicable to the off-road sector. These 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, including support for smaller economically disadvantaged fleets

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 considering all of CARB's current funding priorities, staff is proposing to allocate $194.95 million of FY 2021-22 funding to the CORE program. This includes $30 million appropriated to CARB per SB 170 to fund zero-emission small off-road equipment for professional landscaping services operated by small businesses and sole proprietors. Staff will revise elements of the program to maximize its effectiveness at the proposed funding level.

In order to minimize market disruptions and aid in market recovery, staff has allocated $30 million of the FY 2021-22 appropriation ahead of the Board Meeting to fund vouchers on the current waitlist for the CORE program. This aligns with the Contingency Provisions set forth in the FY 2020-2021 Funding Plan for Clean Transportation Incentives, which gave authority to the Executive Officer to immediately allocate limited funding to ongoing voucher and rebate consumer purchase incentive projects to prevent or reduce program interruptions. Staff will continue to work with stakeholders through the public process to determine if any program adjustments are needed based on projected demand and remaining funds expected after the contingency list is funded. Staff's proposal for the remainder of the allocation is described below.

Proposed Changes to Project Criteria

CORE is still a relatively new program, and staff will continue to engage with stakeholders through a public work group process to make changes to the program. Based on current Board priorities and input received from stakeholders, staff is considering the following changes to the program:

- **Equity and Small Business Considerations:** In coordination with the CORE administrator, staff will identify methods to build greater awareness and make funds more accessible to small businesses while continuing to prioritize the deployment of CORE-funded equipment in low-income, disadvantaged, overburdened and rural

communities. Such methods will include those to be carried out by the CORE administrator as well as those to be carried out by CARB staff. 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.

- **New Equipment Categories:** To fulfill the directives set forth in SB 170, staff is proposing to include zero-emission small off-road equipment, such as leaf blowers, lawn mowers, and portable generators, as eligible equipment types in CORE for small California landscaping companies. Small off-road equipment is a large contributor to emissions in California. In fact, in 2020, daily NOx+ROG emissions from small off-road engines (SORE), which are used to power small off-road equipment, were greater than 140 tons per day, even exceeding such emissions from light-duty passenger cars. In addition, such equipment has a high feasibility of using zero-emission technology, and there are already many zero-emission options available that can provide commercial operators with comparable utility and performance to their SORE-equipped counterparts. Furthermore, there are anticipated benefits of using zero-emission technology in small off-road equipment, such as quieter operation and lower total cost of ownership due to lower operating costs. Nevertheless, the rate of adoption among commercial operators remains lower than that for residential users, due in part to the higher upfront cost for commercial-grade zero-emission equipment. As such, CARB staff has developed a regulatory proposal intended to accelerate the transition of equipment that use small off-road engines to zero-emission technology. To complement the regulatory effort, SB 170 appropriated $30 million dedicated to help fund zero-emission small off-road equipment purchases by small California landscaping companies. As stated above, staff proposes to allocate those funds to CORE. This is because CORE is an established program geared towards incentivizing zero-emission off-road equipment. In addition, it is relatively easy and straight-forward to participate in CORE because equipment dealers play a significant role in the application process. By reducing the cost barrier and making it easier to participate, CORE would help small California landscaping companies reap the economic and environmental benefits of zero-emission technology. Furthermore, staff also proposes to make zero-emission small off-road equipment a generally eligible category in CORE.

  Staff is also proposing to include zero-emission construction equipment in CORE. The zero-emission construction equipment industry is an emerging market and models are currently available in smaller equipment types, such as small excavators and skid-steer loaders. Although interest in CORE began prior to the initial launch of the program, such equipment types have not been eligible because previous allocations were limited by legislation to freight applications only. This year, however, as mentioned above, staff is proposing to allocate $86.5 million from the Air Pollution Control Fund to the program, which would provide the needed flexibility to expand CORE to include zero-emission construction equipment. Staff plans to determine through a

public process the types of zero-emission construction equipment that would be appropriate for inclusion.

Staff is also considering the inclusion of zero-emission agricultural equipment in CORE. Zero-emission technology is newly emerging in the agricultural space and vouchers are necessary to increase user acceptance and adoption. Growers who are willing to scrap conventional equipment may be eligible for higher incentive amounts through the FARMER program. Staff believes CORE could be used to complement FARMER and staff will continue to coordinate with the FARMER program and affected stakeholders to determine the appropriateness of including zero-emission agricultural equipment in CORE.

Lastly, staff will continue to evaluate early-market opportunities to expand the program to include new freight equipment types as well.

- **Voucher Amounts, Off-Ramps for Mature Equipment Categories, and Other Programmatic Changes:** CORE is intended to spur market growth of advanced technology in off-road equipment. Staff will continue to adjust the program in ways that continues to "move the needle" to advance technology, ensure equipment diversity, and maximize the impact of available funding. Potential adjustments could include: reducing voucher amounts for equipment categories that are further along in their commercialization arc, graduating mature technologies, releasing available funding in waves, establishing project caps, and adjusting enhancements, as appropriate. Staff will also investigate opportunities to transfer more control of vouchers to purchasers and to further streamline the voucher process.

  In addition, because the existing voucher process was developed for larger equipment types with lower sales volume, staff will evaluate potential process changes to improve the program's suitability for landscaping equipment and portable generators, which are typically smaller and higher volume. One potential concept is to include a coupon and/or rebate component in CORE for such equipment.

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/how-to-participate/.

Solicitation: Previously, CARB held a competitive solicitation for an initial CORE administrator for a grant term, which is coming to a close. However, CORE has experienced disruptions over the last year due to insufficient funding, which has eroded fleet confidence in the program and limited the incentive opportunities available for zero-emission off-road equipment. 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 voucher processing times, and prolonged waitlists.

CORE is a critical, high-priority effort for the agency that staff does not want to subject to further disruptions. For this reason, CARB staff proposes to not hold a new solicitation this year. CARB staff will re-evaluate the need for a new solicitation next year and, if needed, will hold the solicitation at a time that is as minimally disruptive to the program as possible.

Project Evaluation and Outcomes

The FY 2021-22 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 $194.95 million allocation is deployed, about 97,717 tons of CO2 equivalent will be potentially avoided per year. In addition, the allocation would also potentially provide 71 tons in avoided NOx emissions, 3 tons in avoided PM 2.5 emissions, and 51 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 the collection of operating hours information of CORE-funded equipment, and 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, and 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.

As stated earlier, over 300 CORE vouchers have been issued since inception, totaling approximately $41 million. Approximately 75 percent of CORE-funded equipment has been or will be deployed in low-income and disadvantaged communities ($32.2 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

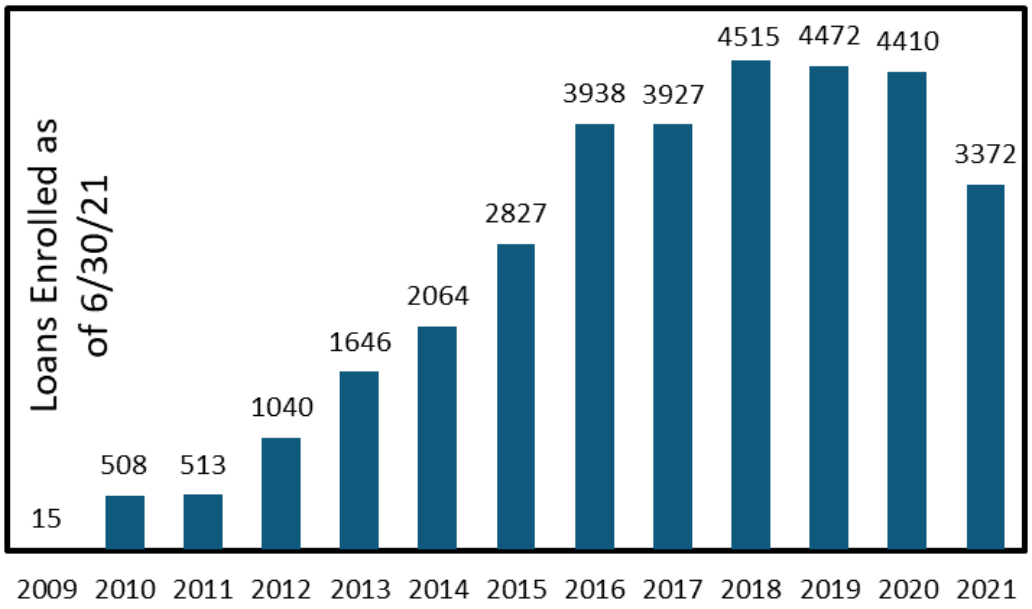
Project Goals

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 California Pollution Control Financing Authority (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.

Current Project Status

As of June 30, 2021, about $171 million in Truck Loan Assistance Program funding had been expended to provide about $2.2 billion in financing to small-business truckers for the purchase of over 35,800 cleaner trucks, exhaust retrofits, and trailers. Demand by truck owners has been increasing over most years of the program and has remained steady over the last few years as shown in Figure 1.

Figure 1: Loan Activity by Calendar Year



CARB contribution rates for lender loan loss reserve accounts were increased in March 2020. The 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 4, 7, 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 rate has significantly increased the consumption of CARB funding from an average of about $3,000 per loan in first quarter of 2020 to about $8,000 per loan in the second quarter of 2021.

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.

Proposed Funding Allocation

CARB staff proposes a funding allocation of $28.64 million for the FY 2021-22 funding cycle. Program need and popularity is expected to be steady in the next couple of years. Factors such as California DMV compliance verification, which will only allow clean trucks in compliance with CARB's Truck and Bus Regulation to be registered by the DMV, upcoming equipment replacement deadlines in the In-Use Truck and Bus 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 fiscal years will be exhausted before the end of FY 2021-22. To ensure the continuity of the program, additional funds will be needed, especially to support zero-emission vehicle financing.

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 In-Use Truck and Bus Regulation will come to an end and 2010 or newer engines will be required except for some exemptions. In addition, with the Governor's executive order moving towards the target of 100 percent of the heavy-duty fleet transitioning to zero-emission vehicles by 2045 everywhere feasible and for all drayage trucks to be zero-emission by 2035, supported by CARB's Advanced Clean Trucks and Advanced Clean Fleets regulations, California is quickly moving toward zero-emission vehicles. With these changes the loan program will have to be adjusted in future years to meet the needs of small business truckers. CARB staff is working with CPCFA and participating lenders to increase the number of zero-emission heavy-duty trucks financed for small fleets. This will include developing strategies in support of the new Innovative Small e-Fleets set-aside in HVIP and looking for ways to adjust the loan program to better support borrowers seeking zero-emission vehicle loans.

Project Evaluation and Outcomes

The proposed FY 2021-22 allocation for the Truck Loan Assistance Program is expected to enable financing for about 3,300 new truck purchases. This will help small business truckers comply with the In-Use Truck and Bus Regulation and result in an estimated 851 tons of NOx and 51 tons of ROG emission reductions. Appendix A provides additional details on the emission estimates.

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 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 $171 million in contributions into $2.2 billion in private financing.

CARB staff will be monitoring the increase in zero-emission trucks enrolled in the program, especially in disadvantaged and low-income communities.

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.

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

CARB's Funding Guidelines for Agencies that Administer California Climate Investments (CCI Guidelines) provide direction for implementing agencies. The CCI Guidelines include requirements and recommendations relating to 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.

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 with the FY 2021-22 Low Carbon Transportation appropriation will provide benefits for AB 1550 populations. The project category descriptions included in Chapters 3 and 4 of this Funding Plan describe the anticipated AB 1550 benefits for each project, and Appendix A shows how staff developed its minimum AB 1550 investment target that at least 60 percent of funds meet one or more of the AB 1550 criteria.
>
> 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 2021-22 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 (HVIP, CORE, and CVRP), 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 zero-emission vehicles and equipment funded with these incentives in the most impacted communities. For CVRP, rebate amounts are higher for low-income vehicle purchasers with household incomes less than 400 percent of the federal poverty level to help these consumers make a clean car purchase.

Outreach is being increasingly focused on disadvantaged and low-income communities and low-income households. CARB is dedicating part of its FY 2021-22 transportation equity funds to support outreach, community transportation needs assessments, technical assistance, and the Accessing 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, and 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.

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 work group process.

CCI Guideline Requirement: Implement outreach efforts that seek to directly engage and involve local community residents and community-based organizations 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, collaborating with the Strategic Growth Council on the California Climate Investments Outreach & Technical Assistance Program, and coordinating quarterly Inter-agency Equity and Clean Mobility Coordination meetings.

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 community-based organizations, 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. That information is available on the Annual Report website: http://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: https://arb.ca.gov/msprog/lct/movingca.htm.
- **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, with a focus on increasing participation for priority populations.
- **Access Clean California:** CARB implements the Access Clean California Pilot Project (formerly known as One-Stop-Shop Pilot Project) 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 this pilot 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. In the Funding Plan, additional funding will be allocated to continuing the project.

- **Outreach Plan:** One of CARB's priority recommendations in the SB 350 Guidance Document is to develop an outreach plan to increase low-income residents' awareness of clean transportation and mobility options. CARB is leading the development and implementation of the SB 350 Outreach Strategic Roadmap (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. CARB has convened working groups consisting of both internal and external stakeholders to solicit ongoing feedback, identify outreach and community engagement best practices, and develop the outreach roadmap.

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 2021-22 Low Carbon Transportation investments are shown in Table 15 below.

Table 15: Common Needs of Priority Populations Addressed by Proposed FY 2021-22 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 CVRP, Clean Cars 4 All, Financing Assistance for Lower-Income Consumers, and Clean Mobility Options projects.*
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 light-duty 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 zero-emission vehicle 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 zero-emission vehicles 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 2021-22 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 zero-emission vehicle investments closely with the California Energy Commission's infrastructure investments, so it is easier for fleets to access infrastructure funding when they purchase zero-emission vehicles.

Set aside a portion of funding for projects benefiting priority populations: Funding for the Clean Mobility Options, Clean Mobility in Schools, and the Sustainable Transportation Equity Project are all limited to disadvantaged communities or disadvantaged and low-income communities. In addition, the Low Carbon Transportation funding for Clean Cars 4 All is limited to ZIP Codes containing disadvantaged communities to ensure that funding is spent in or near disadvantaged communities. Clean Cars 4 All and Financing Assistance funding is limited to lower-income consumers, and CARB reserves a portion of CVRP funding for low-income consumers earning less than 400 percent of the federal poverty level.

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. CVRP provides higher rebate amounts to lower income consumers. Clean Cars 4 All provides tiered incentive amount based on income, with the lowest-income participant receiving the highest incentive amounts.

Chapter 6: Contingency Provisions

The proposed FY 2021-22 Funding Plan is based on the latest available information. However, circumstances may change between the time the proposed 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 $595 million from GGRF for its Low Carbon Transportation Program. Section 15.14 of the Budget Act of 2021 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 2021-22 fiscal year. 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 2021-22 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 funding agreements based on the allocations listed in Table 5 (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 2022-23 or other future budget year to meet excess demand subject to approval by the Board as part of the FY 2022-23 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 fiscal year, or shift the funds to another project category at his 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 2022-23 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 for Low-Income Consumers, Clean Cars 4 All, HVIP, CORE, or Truck Loans would run out of funding prior to Board consideration of the FY 2022-23 Funding Plan, the Executive Office 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 for

Lower-Income Consumers, Clean Mobility Options, 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 proposed Funding Plan specifies all policy-related details regarding the projects to be funded. However, technical or administrative changes 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 describes staff's proposed approach for addressing project implementation costs and provisions for advanced payments in grant agreements.

Project Implementation 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 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. Below is an overview of project implementation costs and how these costs are typically divided among various project types.

Indirect Project Costs

Indirect costs are costs which are not tied directly or solely to the project such as, distributed administration and general administrative services; non-project related contracts or subscriptions; rent and office space, phones and telephone services, printing, or mailing services not associated with staff working on the project; or any other costs that are not directly and fully incurred to support the grant project.

Direct Project Costs

The Budget Act of 2021 does not address non-administrative direct project costs. To present a complete picture, direct project costs are outlined below.

- Direct Project Costs for First-Come, First-Served Projects: Includes project implementation costs and technology costs. Although the statute does not specify a threshold for implementation costs, grant administrators should focus on limiting costs to ensure that the majority of grant funds reach their ultimate recipients. Examples below.
    - Project Implementation Costs: Direct project labor and expenses associated with the project, including all components of project implementation, outreach and education, research and data analysis, program evaluation, required reporting, external consultants, third-party contracts for direct support, travel, and information technology related to project implementation.
    - Technology Costs: Costs associated with vehicles, equipment, and infrastructure that is either used to demonstrate the ability of the technology to achieve emission reductions or to deploy technology to an end user (i.e., business, consumer, etc.) for the purpose of achieving emission reductions. This includes the direct maintenance of these components, if required by the project.

- Direct Project Costs for Transportation Equity Projects, Pilots, and Demonstrations: Includes project implementation costs and technology costs as described above, but limitations are typically based on milestones or deliverables, in addition to some amounts for general direct project expenses, if necessary.

Advance Payments to Grantees:

Consistent with the Legislature's direction to expeditiously disburse grants and Title 17, California Code of Regulations, Section 91040-91044, CARB may provide advance payments of grant awards in a timely manner to support project initiation and implementation 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.

b) Lastly, staff will continue to evaluate early-market opportunities to expand the program to include new freight equipment types as well.

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.)"

Acronym List

1. AB – Assembly Bill
2. APCD – Air Pollution Control District
3. APR – annual percentage rate
4. AQIP – Air Quality Improvement Program
5. AQMD – Air Quality Management District
6. BEV – battery electric vehicle
7. CalSTA – California State Transportation Agency
8. CARB – California Air Resources Board
9. CBO – community-based organization
10. CCR – California Code of Regulations
11. CEC – California Energy Commission
12. CHDC – Community Housing Development Corporation
13. CMIS – Clean Mobility in Schools Pilot Project
14. CMO – Clean Mobility Options
15. CO2 – carbon dioxide
16. CORE – Clean Off-Road Equipment project
17. CPCFA – California Pollution Control Financing Authority
18. CSA – California State Auditor
19. CSE – Center for Sustainable Energy
20. CVA Program – Clean Vehicle Assistance Program
21. CVRP – Clean Vehicle Rebate Project
22. DCAP – Driving Clean Assistance Program
23. DMV – Department of Motor Vehicles
24. EFMP – Enhanced Fleet Modernization Program
25. ePTO – electric power take-off
26. EVITP – electric vehicle infrastructure training program
27. EVSE – electric vehicle supply equipment
28. FARMER – Funding Agricultural Replacement Measures for Emission Reductions
29. FCA – Fiat Chrysler America
30. FCEV – fuel cell electric vehicle
31. FY – fiscal year
32. GGRF – Greenhouse Gas Reduction Fund
33. GHG – greenhouse gas
34. HVIP – Hybrid and Zero-Emission Voucher Incentive Program
35. IRS – Internal Revenue Service
36. LADOT – Los Angeles Department of Transportation
37. NOx – nitrogen oxides
38. OBI – Othering and Belonging Institute
39. PHEV – plug-in hybrid-electric vehicle
40. PM 2.5 – fine particulate matter
41. ROG – reactive organic gases
42. SB – Senate Bill

43. STEP – Sustainable Transportation Equity Project
44. UC – University of California
45. U.S. EPA – United States Environmental Protection Agency
46. VMT – vehicle miles traveled
47. VOGO – Volunteers on the Go
48. ZAP – Zero-Emission Assurance Project
49. ZE – zero-emission
50. ZEB – zero-emission bus
51. ZEM – zero-emission motorcycle
52. ZEPCert – zero-emission powertrain certification
53. ZEV – zero-emission vehicle