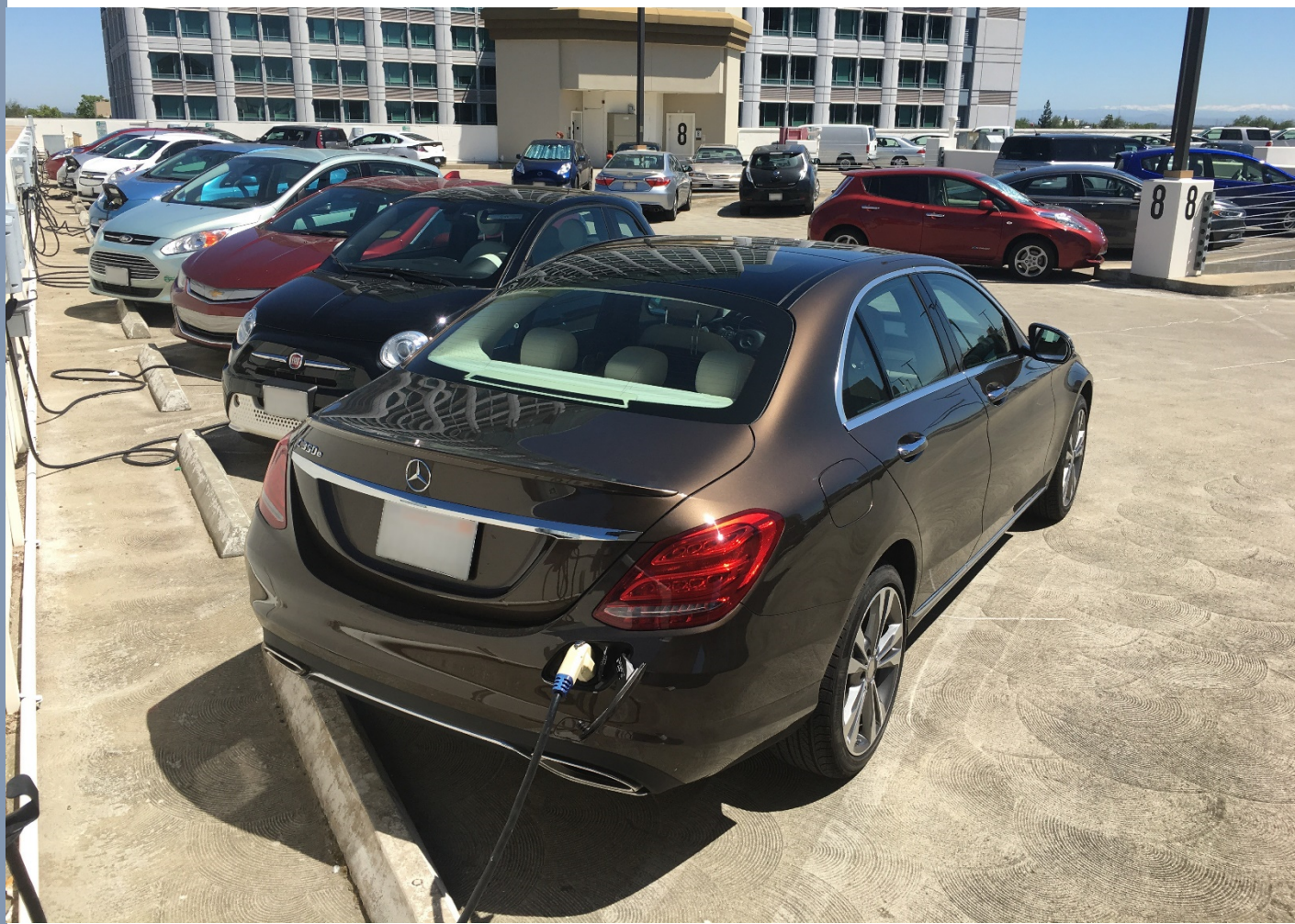
CALIFORNIA
AIR RESOURCES BOARD

Annual Report 2021

Senate Bill 92 (Committee on Budget and Fiscal Review, Chapter 26, Statutes of 2017) Report to the Legislature on Implementation of the Volkswagen Settlement Consent Decree, Appendix C and Appendix D



This report can be viewed at https://ww2.arb.ca.gov/legislatively-mandated-reports. To order a hard copy of this report, please contact David Ernest García, Ph.D., Legislative Director, at (916) 322-8520 or David.Garcia@arb.ca.gov.

Table of Contents

Executive Summary

Senate Bill (SB) 92 (Committee on Budget and Fiscal Review, Chapter 26, Statutes of 2017), codified at Health and Safety Code section 39614, directs the California Air Resources Board (CARB or Board) to provide annual updates to the California Legislature on the progress of implementing the Zero Emission Vehicle Investment Plans under Appendix C of the 2.0-Liter Partial Consent Decree with Volkswagen (VW), and on proposed and actual expenditures of the moneys received pursuant to Appendix D of the 2.0-Liter Partial Consent Decree.[1] The VW settlement resolves California claims related to VW's use of illegal defeat devices – software designed to cheat on emissions tests – in certain 2009 to 2016 model year diesel cars that VW marketed and sold in California. While this report covers implementation of Appendices C and D in the 2020 calendar year as reported in Electrify America's April 30, 2021 Annual Report, CARB staff has provided some additional information on 2021 calendar year activities when available. The activities for 2021 calendar year will be part of next year's report as Electrify America is required to provide the full report on their 2021 implementation progress no later than April 30, 2022.

A. VW Settlement Requirements in Appendices C and D

Under the terms of the VW settlement, VW will fund or invest more than $1.2 billion in California over 10 years, as follows:

- Appendix C, the Zero-Emission Vehicle (ZEV) Investment Commitment, requires VW to invest $800 million in California over a 10-year period – in four consecutive $200 million, 30-month ZEV Investment Plan cycles – to support the increased use and availability of ZEVs in the State. Appendix C outlines four areas of qualified investments: ZEV infrastructure (including developing and maintaining ZEV charging or hydrogen fueling stations), ZEV public awareness, increased ZEV access, and Green City projects.[2] VW is implementing this commitment through its subsidiary, Electrify America.

[1] The Partial Consent Decrees are available at https://ww2.arb.ca.gov/resources/documents/vw-settlement-consent-decrees.

[2] The 2.0-Liter Partial Consent Decree provided for a "Green City" initiative in one city. The California-only portion of the 3.0-Liter Partial Consent Decree adds a second Green City project requirement, and the second Green City must be located in a city with a population of about 500,000 and consist primarily of disadvantaged communities.

- Appendix D, the Environmental Mitigation Trust, is intended to fully mitigate all past and future excess oxides of nitrogen (NOx) emissions from the vehicles subject to the settlement by requiring VW to pay about $2.7 billion into a national mitigation trust fund.[3] California's allocation of the trust is about $423 million. CARB developed a Beneficiary Mitigation Plan that describes the projects California will fund with its allocation. The Consent Decree defines the eligible mitigation actions; most are scrap-and-replace projects for the heavy-duty sector.

B. CARB has complied with SB 92

SB 92 establishes several requirements for Appendices C and D of the 2.0-Liter Partial Consent Decree. Some requirements apply to both Appendices, while others are unique to one or the other. As this report details, CARB continues to meet all requirements and direction provided by the Legislature in SB 92.

One requirement in SB 92 that applies to both Appendices is that CARB must strive to ensure that both Appendix C investments and Appendix D expenditures are aligned with the State's priorities. Electrify America's approved Appendix C investments, in its ZEV Investment Plans, and the Appendix D Beneficiary Mitigation Plan expenditures align with the State's 2025 and 2030 ZEV goals, 2035 transportation electrification goals,[4] and statutory climate pollutant goals, including reducing greenhouse gas emissions to meet 2030 targets and achieving carbon neutrality by 2045.[5] Electrify America's ZEV Investment Plans fund light-, medium-, and heavy-duty electrified vehicles and charging infrastructure. The Beneficiary Mitigation Plan funds mostly heavy-duty scrap and replace projects with an emphasis on zero-emission vehicles and equipment.

Appendix C investments and Appendix D expenditures also align with California's goal of increasing access to clean transportation and mobility options, especially in underserved areas, as established in the Clean Energy and Pollution Reduction Act of 2015 (SB 350, De León, Chapter 547, Statutes of 2015). The publicly-approved Appendix C ZEV Investment Plans achieve this goal by installing ZEV infrastructure in underserved areas and funding ZEV car share and shuttle/bus services that operate primarily in disadvantaged communities; the Beneficiary Mitigation Plan achieves this goal by funding ZEV transit, school, and shuttle buses, many of them serving California's low-income or disadvantaged communities.

An additional requirement in SB 92 that applies to both appendices is that CARB strive to provide for public transparency before approving Appendix C investments and Appendix D expenditures. To date, CARB has approved the first three of four ZEV Investment Plans

[3] This is the total amount required under both the 2.0-Liter and 3.0-Liter Partial Consent Decrees. The 3.0-Liter Partial Consent Decree added $225 million to the national Trust and about $41 million to California's Trust allocation.

[4] Governor Newsom's Executive Order N-79-20 calls for 100 percent of light-duty vehicle sales, 100 percent of short-haul and drayage trucks in operation, and 100 percent of off-road equipment and operations, where feasible, to be zero-emission by 2035. It also calls for 100 percent of heavy-duty trucks and buses in operation to be zero-emission, where feasible, by 2035. https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf

[5] Executive Order B-55-18, Governor Brown, September 10, 2018. https://www.ca.gov/archive/gov39/wp-content/uploads/2018/09/9.10.18-Executive-Order.pdf

required by Appendix C in public hearings, and has also approved the Beneficiary Mitigation Plan required by Appendix D. For each of the ZEV Investment Plans and the Beneficiary Mitigation Plan, CARB staff undertook an extensive public process that included discussions with stakeholders, public workshops, and public board meetings. As part of this public process, CARB posted each proposed ZEV Investment Plan and the Beneficiary Mitigation Plan for public comment before the respective public hearings to consider adoption of the Plans.

As it applies to Appendix C, SB 92 further prescribes that:

- CARB strive to ensure, to the maximum extent allowable under the 2.0-Liter Partial Consent Decree, that: (1) at least 35 percent of the funds for each ZEV Investment Plan benefit low-income or disadvantaged communities disproportionately affected by air pollution, and (2) VW or its subsidiary periodically submit progress reports to CARB on the implementation of the approved ZEV Investment Plan;
- CARB approve each ZEV Investment Plan at a public hearing;
- CARB post each proposed ZEV Investment Plan for public comment; and
- CARB report annually to the Legislature on the progress of the implementation of the approved ZEV Investment Plans.

As it applies to Appendix D, the legislation further prescribes that:

- CARB shall strive to ensure, to the maximum extent allowable under the 2.0-Liter Partial Consent Decree, that 35 percent of the moneys received pursuant to Appendix D benefit low-income or disadvantaged communities disproportionately affected by air pollution; and
- CARB shall report annually to the Legislature on the proposed and actual expenditures of the moneys received pursuant to Appendix D. As of December 31, 2020, $162 million in funding for five project categories has been released in public solicitations. A total of $74,453,450 has been disbursed (expended) from the Trust to date.

The remainder of this report provides additional detail and addresses how CARB met the statutory requirements in SB 92, summarized above. This third annual report reflects progress made during the first three years of implementation. As implementation investments grow, CARB staff will have even more investment and expenditure information on which to report. CARB staff will continue to ensure compliance with SB 92.

The ZEV Investment Commitment – Consent Decree Appendix C

This section focuses on Appendix C of the 2.0-Liter Partial Consent Decree: The ZEV Investment Commitment. The ZEV Investment Commitment is intended to function as injunctive relief that complements the other pieces of the Consent Decree, addressing the impact to California's ZEV market resulting from VW's sale and marketing of approximately 70,000 2.0-liter high-emitting diesel vehicles in California as clean vehicles.

Under the terms of the ZEV Investment Commitment, VW, through its subsidiary, Electrify America, must invest $800 million in California over a 10-year period – in four consecutive $200 million, 30-month ZEV Investment Plan cycles – to support the increased use and availability of ZEVs in the State. Each of Electrify America's four separate $200 million ZEV Investment Plans, which must be approved, in whole or in part, by CARB, spells out the investments Electrify America proposes to make within the 30 months in the four areas eligible for investment under the Consent Decree: ZEV infrastructure (including the development and maintenance of ZEV charging or hydrogen refueling stations), public awareness, increasing ZEV access, and the establishment of two "Green Cities," with emphasis on transportation electrification projects like zero-emission car sharing and transit to increase mobility, and potentially, zero-emission freight[6].

In addition to the requirements established under the 2.0-Liter Partial Consent Decree and SB 92, the Board, via Resolution 17-23, has directed that:

- Electrify America's ZEV Investment Plan awareness program materials be brand neutral, use a language other than English, when appropriate, and include acknowledgement of hydrogen fuel cell electric vehicles, when appropriate;
- Electrify America and CARB prepare and update a census tract-level map of charging station investments highlighting low-income and disadvantaged community investments;
- Electrify America should provide hiring opportunities for qualified residents of disadvantaged communities; and
- CARB staff, after consulting with stakeholders, including environmental justice groups, labor organizations, auto manufacturers, and other EV charging companies, report to the Board at least twice a year on progress toward achieving the objectives of the Consent Decree.

Public Process

As of December 31, 2020, CARB has approved the Cycle 1 and Cycle 2 ZEV Investment Plans. Prior to approval of the Cycle 1 Plan, CARB conducted an extensive public process to inform decision-making on, and implementation and oversight of Electrify America's ZEV Investment Plans. From that process, which included an early workshop, the release of a CARB Guidance Document to help Electrify America consider public and State feedback in developing its draft ZEV Investment Plan, and three Board meetings, CARB solidified reporting and disadvantaged community spending commitments from Electrify America.

[6] The requirement for a second Green City project, to be implemented in a city with a population of approximately 500,000 that primarily consists of disadvantaged communities, is contained in the California-Specific Second Partial Consent Decree (for subject 3.0-liter diesel vehicles).

Tables 1 and 2 on the following pages describe the Cycle 1 and Cycle 2 Plan public processes in detail. The Cycle 1 public process was the more extensive of the two, as it was necessary to include additional foundational meetings during which staff educated the public on the 2.0-Liter Partial Consent Decree and solicited public and Board input that was used to develop CARB's guiding principles for Electrify America's consideration in developing its ZEV Investment Plans.

Electrify America has been meeting with CARB on a monthly basis since shortly after approval of the Cycle 1 Plan to discuss implementation progress. Implementation of the Cycle 1 Plan is now complete, but Electrify America and CARB continue to meet monthly to discuss implementation of the Cycle 2 Plan. CARB will consider Electrify America's draft Cycle 3 Plan, after time for public comment on the draft Plan, at a summer 2021 Board hearing.

Electrify America also provides CARB and the public with written quarterly and annual update reports. To date, the company has submitted annual reports for the 2017, 2018, 2019, and 2020 calendar years; the last annual report was submitted on April 30, 2021. Electrify America and CARB provide access to these reports on their respective public websites.

Table 1: Cycle 1 Plan Public Process

Date	Activity	Information Provided
12/2/16	Public Workshop	Staff provided details on the Consent Decree and obtained input from the public to help shape guidance (consistent with the Consent Decree) to Electrify America for use in crafting the Cycle 1 and future Plans.
12/8/16	Board Meeting	Staff updated the Board on the Consent Decree, describing the content and different functions of the various Appendices, and identified CARB's proposed priorities and guidance for the Cycle 1 Plan. Staff also summarized common themes from the public comments that CARB received at the December 2, 2016 public workshop.
2/10/17	Publicly Posted Document Transmittal	CARB transmitted a Guidance Document[7] reflecting public and Board feedback to Electrify America regarding ZEV investment opportunities consistent with the objectives and criteria set forth in Appendix C, to help inform Electrify America's development of the Cycle 1 Plan.
3/14/17	Publicly Posted Plan	CARB posted Electrify America's proposed Cycle 1 ZEV Investment Plan[8] for a four-week public comment period.
3/24/17	Board Meeting	Staff provided an overview of Electrify America's proposed Cycle 1 Plan to the Board and the public. Board members and stakeholders expressed concern that the Plan did not adequately respond to some of CARB's February Guidance Document. In response, CARB committed to soliciting additional information from Electrify America addressing the concerns regarding the submitted Cycle 1 Plan.
5/24/17	Publicly Posted Request for Supplement	CARB outlined proposed Cycle 1 Plan concerns and requested that Electrify America submit a Plan Supplement with more information on proposed expenditures in disadvantaged communities, brand neutral infrastructure and education, and a long-term investment planning vision. Electrify America submitted the Supplement on June 29, 2017.
6/29/17	Publicly Posted Plan Supplement	CARB posted Electrify America's Supplement to the proposed Cycle 1 ZEV Investment Plan[9] for a two-week public comment period.
7/27/17	Board Meeting	Staff provided an overview of Electrify America's proposed Cycle 1 Plan, including the Supplement; the Board approved the Plan.

[7] CARB, 2017. California Air Resources Board's Guidance to Volkswagen on First 30 Month Electric Vehicle Infrastructure Investment Plan of the 2.0 Liter Diesel Engine Partial Consent Decree Settlement, February 10, 2017. (https://ww2.arb.ca.gov/sites/default/files/2020-03/zip_1_%20guidance_ac.pdf)

[8] Electrify America, 2017. Cycle 1 California ZEV Investment Plan, March 8, 2017. (https://www.electrifyamerica.com/assets/pdf/California%20ZEV%20Investment%20Plan%20Cycle%201.3bc672a3.pdf)

[9] Electrify America, 2017. Supplement to the Cycle 1 California ZEV Investment Plan: June 29, 2017. (https://www.electrifyamerica.com/assets/pdf/Cycle%201%20CA%20ZEV%20Invest%20Plan%20Supplement.a92e7705.pdf)

Table 2: Cycle 2 Plan Public Process

Date	Activity	Information Provided
10/3/18	Publicly Posted Plan	CARB posted Electrify America's proposed Cycle 2 ZEV Investment Plan[10] for public comment.
11/15/18	Board Meeting	Staff provided an overview of the proposed Cycle 2 Plan. The Board did not have a quorum to vote on the Plan, and expressed concern that staff had not solicited enough comments from stakeholders regarding Electrify America's progress toward achieving the objectives of the 2.0-liter Partial Consent Decree, as required by the Board.
12/7/18	Public Meeting	CARB staff solicited additional comments from stakeholders regarding Electrify America's progress toward achieving the objectives of the 2.0-liter Partial Consent Decree.
12/13/18	Board Meeting	Staff provided an overview of the proposed Cycle 2 Plan and additional stakeholder feedback to the Board and public; the Board approved the Plan.

Approved Cycle 1 Plan Investments

CARB approved Electrify America's Cycle 1 ZEV Investment Plan on July 27, 2017. The Cycle 1 Plan covered the 30-month period that concluded on June 30, 2019. Table 3 below shows the project funding categories and investment amounts approved by the Board for the Cycle 1 Plan. The funding categories are consistent with the objectives and criteria set forth in Appendix C and SB 92, and were refined during an extensive public process. The Cycle 1 Plan investments are further described after the table.

Table 3: Approved Cycle 1 Plan Investments[11]

Investment Category	Investment (in millions)
ZEV Infrastructure	$120
Green City ZEV Access Demonstration Project (Sacramento)	$44
ZEV Awareness and Education	$20
Operational Expenses	$16
TOTAL	**$200**

[10] Electrify America, 2018. California ZEV Investment Plan: Cycle 2, October 3, 2018. (https://www.electrifyamerica.com/assets/pdf/Cycle%202%20California%20ZEV%20Investment%20Plan.3e6ce81a.pdf)

[11] Table 3 only reflects planned Cycle 1 Plan investment amounts as approved by CARB. An exhibit of actual Cycle 1 Plan expenditures may be found in Table 6.

Zero-Emission Vehicle Infrastructure: $120 Million

Image source: Electrify America

The majority of this investment – $75 million – was used to install a statewide network of highway fast-charging stations that will serve California's plug-in drivers and allow for ultra-fast refueling – up to 200 miles in 15-30 minutes. The remainder of this investment was used to install fast-charging and 208-240 volt Level 2 charging at retail and community locations, municipal parking facilities, workplaces, and multi-family housing units in the following six California metropolitan areas: Fresno, Los Angeles-Long Beach-Anaheim, Sacramento-Roseville-Arden Arcade, San Diego-Carlsbad-San Marcos, San Francisco-Oakland-Hayward, and San Jose-Sunnyvale-Santa Clara. Approximately $5.2 million in Cycle 1 infrastructure funding was unspent in Cycle 1 and funded infrastructure activity in Cycle 2, as allowed under Appendix C.

Green City ZEV Access Demonstration Project (Sacramento): $44 Million

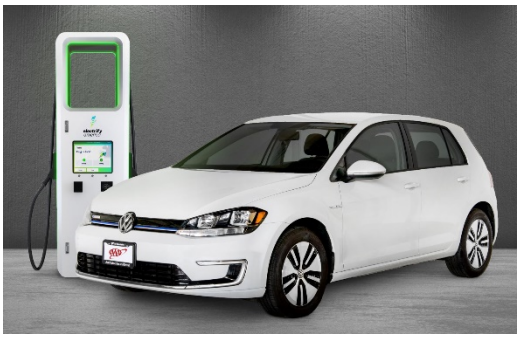


Image source: Electrify America

The Green City investment in Sacramento established: two new car sharing services administered by GIG and Envoy; a new zero-emission, on-demand shuttle bus service along the Franklin Boulevard corridor (an area of the city which had been without a bus line); a new zero-emission transit bus service operating between the Davis and Sacramento campuses of the University of California, Davis; and the charging infrastructure and marketing associated with each of the aforementioned projects. Almost $19 million of the $44 million investment is supporting fast-charging for GIG Chevrolet Bolt EVs and transit buses, and Level 2 charging for Envoy VW e-Golfs. Finally, Electrify America selected 3Fold Communications, a marketing agency with established connections to Sacramento's low-income and disadvantaged communities, to create a Green City awareness campaign called Sac-to-Zero[12] to grow awareness and use of Sacramento's Green City programs. Approximately $3.5 million in Cycle 1 Green City funding was unspent in Cycle 1 and funded additional Green City activities in Cycle 2, as allowed under Appendix C.

[12] Sac-to-Zero's website is at https://sactozero.com/

ZEV Awareness and Education: $20 Million

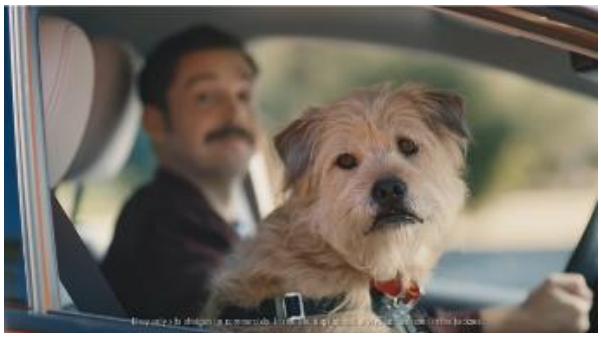


Image source: Jetstones TV Ad screen capture

Electrify America, during development of its Cycle 1 Plan, shared third-party research indicating that more than half of all Californians were unaware of ZEVs. Electrify America's implemented awareness plan has contributed to brand-neutral ZEV awareness, through a combination of web-based, social, and traditional (TV and radio) media.

Approved Cycle 2 Plan Investments

CARB approved Electrify America's Cycle 2 ZEV Investment Plan on December 13, 2018. The Cycle 2 Plan covers the 30-month period from July 1, 2019 through December 31, 2021. The 2.0-Liter Partial Consent Decree provides that VW may also complete its Cycle 1 spending activities during Cycle 2 without penalty. Table 4 below shows the project funding categories and investment amounts approved by the Board for the Cycle 2 Plan. The funding categories are consistent with the objectives and criteria set forth in Appendix C and SB 92, and were refined during a public process that included a stakeholder meeting and two Board meetings. The approved investments are further described after the table.

Table 4: Approved Cycle 2 Plan Investments[13]

Investment Category	**Investment** (in millions)
ZEV Infrastructure	$153
Public Education, Awareness, and Marketing Activities	$27
Operational Expenses	$20
TOTAL	**$200**

[13] Table 4 only reflects planned Cycle 2 Plan investment amounts as approved by CARB. An exhibit of actual Cycle 2 Plan expenditures may be found in Table 7.

Zero-Emission Vehicle Infrastructure: $153 Million

Image source: Electrify America

Electrify America is investing $95-115 million to expand charging infrastructure within the six metropolitan areas in which investments were made in Cycle 1, as well as in three new areas: Riverside-San Bernardino, Santa Cruz-Watsonville, and Santa Rosa. Electrify America reports that these nine metropolitan areas are projected to have 89 percent of the 2022 plug-in electric vehicle population in the State. Another $25-30 million is being used to expand primarily fast-charging infrastructure along highways and regional routes, including in three rural areas with high concentrations of low-income or disadvantaged communities (the Central, Coachella, and Imperial Valleys). Additionally, $8-12 million is going toward 2,500-3,300 residential Level 2, demand response-capable chargers, and a website tool, which is integrated with CARB tools targeted toward low-income consumers, to identify existing incentives; $4-6 million is going toward charging infrastructure for electrified transit buses; $2-4 million is going toward autonomous vehicle charging, to facilitate fueling of the coming generation of autonomous plug-in electric vehicles; approximately $2 million is going toward Level 2 charging in rural areas that have historically been underserved by charging infrastructure;[14] and up to $5 million is going toward renewable generation that will decrease upstream emissions from electricity generation and provide for greater economic sustainability.

Public Education, Awareness, and Marketing activities: $27 Million

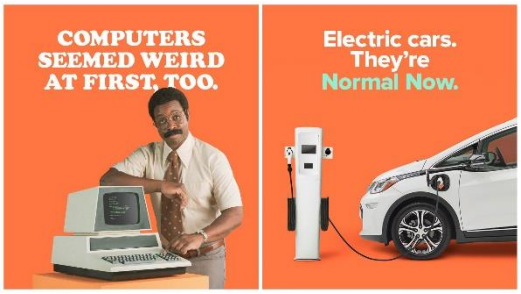


Image source: Electrify America

In Cycle 2, Electrify America continues to use traditional and social media to increase public awareness of ZEVs and their benefits, emphasizing: (1) the performance and comfort characteristics that drivers say they want, (2) range confidence (including the range of new vehicles and the convenience of public charging infrastructure), and (3) the diversity of vehicle choice. As awareness levels increase, Electrify America is directly targeting marketing at this ZEV-aware audience, using ride and drive events and, potentially, experience centers, to promote even stronger ZEV consideration.

[14] In a written request to Electrify America, rural community stakeholders and advocates expressed that: (1) they preferred Level 2 charging because of the typically lower cost, and (2) charger siting should prioritize health centers and educational institutions, as these sites are visited frequently and offer extended hours of access. Electrify America has stated that they will target these stations toward educational and health care institutions, with site host permission.

Electrify America is using marketing to boost station utilization. Messaging communicates, for each charging station, its location, charging speed, acceptable payment methods, and nearby amenities. It also communicates information on accessibility, subscription plans and other efforts to improve affordability, and agreements to provide ultra-fast charging services to buyers of electric vehicles from a total of eight brands (seven automotive and one motorcycle).

Proposed Cycle 3 Plan Investments

As of the submittal of this report, Electrify America had submitted its proposed Cycle 3 ZEV Investment Plan, covering the 30-month period from January 1, 2022 through June 30, 2024, which CARB approved on June 24, 2021. The Cycle 3 Plan will be covered in detail in the 2022 Annual Report to the Legislature.

ZEV Investment Plan Progress

As required under the Consent Decree, Electrify America has submitted its 2020 annual report on time. CARB staff has reviewed the report and found that meaningful progress has been made toward the investment goals established in the Cycle 1 and 2 Plans, especially in the rollout of charging infrastructure. The following sections first illustrate Electrify America's progress as of December 31, 2020, in implementing each of the Cycle 1 and Cycle 2 investment plan categories, and then present actual expenditures in tables 6 and 7 for the two investment plans.

Zero-Emission Vehicle Infrastructure

As previously mentioned in the descriptions of the Cycles 1 and 2 ZEV Investment Plans, Electrify America planned to deploy direct current (DC) fast chargers at sites located both along highway corridors and in the Fresno, Los Angeles, Riverside-San Bernardino, Sacramento, San Francisco, San Diego, San Jose, Santa Cruz-Watsonville, and Santa Rosa metropolitan areas. It also planned to deploy Level 2 charging stations at workplace and multi-unit dwellings (MUD) within the same metropolitan areas. Table 5 below reflects annual deployment status through the fourth calendar quarter (Q4) of 2020.

Table 5: Charging Infrastructure Status

DC Fast Charging Stations				Level 2 Charging Stations			
				MUDs/Workplace			Rural Solar
Status	Q4 2018	Q4 2019	Q4 2020	Q4 2018	Q4 2019	Q4 2020	Q4 2020
In permitting	134	165	228	--	--	--	N/A
Permit complete	62	152	207	--	--	--	N/A
Site work complete	14	128	185	--	--	--	N/A
Operational	5	78	152	74	241	241	30

Electrify America reports that 55 percent of the operational DC fast chargers and 42 percent of the operational Level 2 chargers are in disadvantaged and low-income communities. CARB staff verify that reported stations are in disadvantaged and low-income census tracts consistent with the provisions of AB 1550 (Gomez, Chapter 369, Statutes of 2016) by first cross-checking them with census tracts identified by CalEnviroScreen 3.0 as disadvantaged and/or low income and then mapping them through ArcGIS. Electrify America also reports that, of its investment in DC fast-charging stations, more than $81 million is in rural areas of the state.

In Q4 2020, Electrify America became the first charging station provider to launch "Plug&Charge." Via Plug&Charge, Electrify America's fast chargers use a secure international communication protocol (ISO 15118) to recognize Plug&Charge-capable vehicles when they plug in, allowing for automatic charging and billing without any payment transaction by the driver.

In early 2019, Electrify America ordered more than 20 megawatt-hours of Tesla storage batteries for use at DC fast-charging stations. These onsite battery systems can reduce high utility demand charges and on-peak energy charges while easing grid loads by using lower-priced energy that was stored during low-demand periods. During 2020, Electrify America continued to incorporate these battery systems, with utilities approving 71 of the 73 applications for collocated battery systems, and commissioning 23 systems. Electrify America also continued to procure renewable energy credits; all electricity delivered at California DC fast-charging stations and public workplace Level 2 stations in 2020 was 100 percent renewable.

Finally, on the Level 2 infrastructure side, Electrify America deployed 30 transportable, solar-powered EV ARC™ 2020 stand-alone stations to rural areas in the State, with a high proportion being placed in rural Fresno County. Each station is equipped with a 4.28 kilowatt (kW) sun-tracking solar array, 32 kW-hours of on-board battery storage, and two Level 2 chargers, allowing two customers to charge simultaneously.

Electrify America reported that it experienced pandemic-related, permitting, and utility interconnect challenges in 2020.[15] In response to the COVID-19 pandemic, Electrify America implemented mandatory telework and imposed travel restrictions. It was also impacted by government (station inspection) and station site host restrictions. These restrictions slowed Electrify America's infrastructure progress early in the pandemic (Q2 2020), but progress accelerated rapidly toward the end of the year, culminating in the commissioning of 58 DC fast-chargers in Q4 2020.

Permitting timelines continued to worsen in 2020, rising from an average of 53 business days in 2018 to 77 business days. Electrify America indicates that this is 38 percent longer than the national average. This extended timeline, along with extended zoning review by, and aesthetic redesign requests from, authorities having jurisdiction (AHJ) means it also costs Electrify America 32 percent more, on average, to design and construct a fast-charging station in California. AB 1236 (Chiu, Chapter 598, Statutes of 2015) established permit streamlining requirements for AHJs, constraining permit review to health and safety matters, and precluding extended zoning review and aesthetic requests, but the Governor's Office of Business and Economic Development (GO-Biz) has determined that only 24 percent of California's AHJs are in compliance as of December 31, 2020. Electrify America continues to work with GO-Biz, which has developed an AB 1236 Fact Sheet, a Permitting Guidebook, Permitting Scorecard, and the Permitting Olympics initiative to educate AHJs on the permit streamlining requirements of AB 1236.

Utility interconnection timelines also continue to worsen in 2020, rising from an average of 35 weeks in 2019 to 38 weeks, both because of the pandemic and the impact of wildfires and extreme heat events on utility priorities. Interconnection work can include: (1) the addition of electrical equipment like transformers, (2) utility inspection, (3) utility energization, and (4) commissioning. In some areas of the State, Electrify America has taken on civil engineering work that is typically accomplished by the utilities to support upgrades to the energy distribution system and speed commissioning of a station.

Green City ZEV Access Demonstration Project

Via its first Green City Initiative, Electrify America continues to invest in zero-emission car sharing and transit, and the associated charging infrastructure, in the Sacramento area in 2020. The GIG free-float (point-to-point) car share fleet in Sacramento, comprised 260 Chevrolet Bolt EVs with roof-mounted bike racks, continued to be the largest all-electric car share fleet in the United States. In 2020, the GIG fleet made more than 82,000 trips. Though the number of trips was down from 94,000 trips in 2019, the GIG fleet logged more

[15] Descriptions of these challenges and Electrify America's responses to them are as reported by Electrify America in their 2020 Annual Report.

than 1,500,000 miles, significantly up from 871,000 miles in 2019. As of June 2021, the GIG fleet has logged more than 3,000,000 miles. GIG estimates that disadvantaged and low-income census tracts comprise 65 percent of its 18-square mile "home zone"

The Envoy Technologies multi-unit dwelling (MUD) (return trip) car share program grew to 45 locations by the end of 2020, comprising 90 VW e-Golf EVs and 82 chargers. The Envoy vehicles are available for both conventional rentals and shared economy ride-hailing activities (like those of transportation network companies Uber or Lyft). In 2020, 717 residents logged more than 11,800 trips using the program. Approximately 71 percent of the locations are in disadvantaged and low-income communities.

In August 2020, AAA launched a short-term ZEV rental subscription program in the Sacramento area including 55 VW e-Golfs provided by Electrify America. Program vehicles were delivered to consumers' homes, and the cost included insurance, repairs, maintenance, and emergency roadside assistance. COVID-19 proved to be a barrier to mass adoption of the program. As of the end of the year, the program had only attracted 29 qualified subscribers. Twelve of those subscribers received a $100 per month discount as part of the Affordable Access Program, bringing driver cost to about $11 per day. By the end of 2020, drivers had logged more than 46,000 miles.

In Q1 2019, Electrify America signed an agreement with Sacramento Regional Transit (SacRT) and Yolo County Transportation District (YCTD) to provide 12 Proterra E2 Catalyst electric transit buses for the Causeway Connection, a service linking the University of California, Davis (U.C. Davis) to downtown Sacramento and U.C. Davis Medical Center. On May 4, 2020, the buses commenced operation, providing an estimated 165,000 passenger miles of service by year's end. They were supported by ultra-fast charging stations at 4 sites – the SacRT depot, the YCTD depot, and two en route locations in Davis and Sacramento. All of the Proterra buses are domiciled in, and serve stops in, low-income and disadvantaged communities.

Electrify America also signed an agreement with SacRT and the Franklin Neighborhood Development Corporation to operate an on-demand micro-transit shuttle bus service along Franklin Boulevard as part of SacRT's SmaRT Ride initiative using three GreenPower EV Star shuttles; those shuttles commenced operation in the second half of 2020. The service provided an estimated 15,000 passenger miles of service during 2020. Of the census tracts in the GreenPower shuttle service territory, 84 percent are in low-income and disadvantaged communities.

Electrify America and 3fold Communications completed deployment of the Sac-to-Zero education and awareness campaign in 2020. Prior to the emergence of the pandemic, Sac-to-Zero coordinated three in-person events, including stakeholder meetings for both the SacRT SmaRT Ride and Causeway Connection services. In response to COVID-19, the vast majority of the remaining 2020 communications campaign activities were digital, including:

- social media channels;
- a partnership with the Sacramento Republic FC professional soccer team that included on-site signage, TV broadcasts, website logos, and phone app ads; and
- paid advertising campaigns through Facebook and Instagram (Q4 2020).

Public Education, Awareness, and Marketing

In Q3 2019, Electrify America launched a new $17 million streaming audio, digital TV, and social media education and awareness campaign that focuses on four ZEV messaging pillars: performance, range, the breadth of product availability, and the availability of charging infrastructure. Included in that campaign was the website Normal Now, which replaced Electrify America's prior plugintothepresent.com website. While still providing information on battery electric and fuel cell electric vehicles in both English and Spanish, the goal of Normal Now is to address the public's fear of change and lack of exposure to ZEVs by humorously showing how technology matures and becomes mainstream. Normal Now provides an overview of the benefits of ZEVs, with links to content-rich, third-party websites like the federal government's Alternative Fuels Data Center and fueleconomy.gov, Plug In America (PIA) and its shopping research site PlugStar, and PlugShare.

In 2020, the Normal Now campaign accomplished almost one-third of a billion impressions (listeners and viewers) in California, 37 percent of which were in low-income and disadvantaged communities. The campaign also received an "Outstanding Achievement in Internet Advertising" award from the Web Marketing Association for producing the "Best Automobile Online Ad" of the year. Normal Now also partnered with PIA for National Drive Electric Week digital ads. Surveys showed exposed groups were significantly less concerned about EV affordability, range, and accessibility. Normal Now paused the campaign twice during 2020 to conduct research assessing the sensitivity of its messaging, the first time being early in the COVID-19 pandemic, and the second time being in July in response to the national civil rights movement.

In 2018, CARB reported that Electrify America targeted $2.7 million toward new partnerships with community-based organizations (CBO) that have greater access to, and credibility within, California's low-income or disadvantaged communities. Those CBOs included Valley Clean Air Now (Valley CAN), Pacific Asian Consortium in Employment, Chinese Newcomers Service Center, Self Help for the Elderly, Liberty Hill Foundation and GRID Alternatives. In 2019, Electrify America concentrated its CBO efforts on Valley CAN, because of Valley CAN's demonstrated ability to further ZEV awareness in low-income and disadvantaged communities, and to assist those community members in upgrading to a ZEV via CARB's Clean Cars 4 All (CC4A) vehicle replacement program.

In 2020, Electrify America announced an additional $3 million investment to support CBO work to raise ZEV awareness and adoption in low-income and disadvantaged communities. They invited more than 100 California-based CBOs to submit proposals to support brand-neutral ZEV education and awareness, and selected six for funding:

- Breathe SoCal (formerly BREATHE LA) is collaborating with PIA to show the powerful benefits of driving electric by providing ZEV ride and drive events among low-income and disadvantaged community populations in the greater Los Angeles County, San Bernardino, and Riverside County areas.
- The Central California Asthma Collaborative (CCAC) engages with low-income or disadvantaged community residents across the San Joaquin Valley, including via coordination of the Clean Vehicle Empowerment Collaborative (CVEC), a group of eight

community-based organizations that serve as trusted messengers in disadvantaged Central Valley communities. This program supports the development of an EV Navigator Program (EVN Program), providing residents one-on-one assistance with ZEV pricing, financing, and incentive applications.

- Drive Clean Bay Area (DCBA) focuses on engaging local schools, nonprofits, and businesses to educate their stakeholders on driving electric. The DCBA campaign launched the ZEV Families Program in 2019 in collaboration with Acterra: Action for a Healthy Planet, Charge Across Town, and Cool the Earth to connect low-income families in the San Francisco Bay Area to the clean transportation movement.
- Ecology Action (EcoAct) works with four community partners to provide ZEV ride and drives, ZEV showcase events, and individualized ZEV purchase guidance by using bilingual EV ambassadors virtually and in person (when it is safe to do so). EcoAct operates in the California Central Coast region, including in Santa Cruz, San Benito, Monterey, San Luis Obispo, Santa Barbara, and Ventura counties.
- Liberty Hill Foundation (LHF) focuses on connecting low-income or disadvantaged community households across Los Angeles County with diverse grassroots groups through its emPOWER program - a partnership between LHF and nine CBOs operating across Los Angeles County in areas on the frontlines of industrial pollution. emPOWER leverages the extensive network of CBO partners across social media platforms, as well as through direct outreach leveraging local community members, volunteers, and leaders.
- Valley CAN is committed to quantifiably reducing air pollution emissions in the San Joaquin Valley. Valley CAN and its partner Charge Across Town offer San Joaquin Valley low-income or disadvantaged community groups an opportunity to drive ZEVs, and also provide hands-on help with qualifying for ZEV incentives through Community Clean Car Clinics and Tune In & Tune Up events.

Electrify America also sponsored the following education and outreach activities in 2020:

- Veloz's development of the Home Charging Advisor tool, which provides users with information about Level 2 chargers available for their homes, along with total cost estimates based on purchase cost, installation costs, and available incentives.
- EVNoire's "Drive the Future California" study to identify and overcome barriers to electrification among African Americans living in California. Initial activities in 2020 consisted of convening focus groups to discuss perceptions of EVs and the barriers to adoption, and analyzing focus group transcripts to distill recurring themes. EVNoire also developed survey questions and an online survey platform to support the second phase of the study, to be conducted in early 2021.
- Coalition for Clean Air's Clean Air Day activities, wherein employers provide their employees the opportunity to sign up to take a pledge to modify behaviors in support of cleaner air practices.
- California Hydrogen Business Council's California Hydrogen and Fuel Cell Summit in Sacramento, with session topics including identifying opportunities in renewable hydrogen, negative emissions, achieving scale and reliable supply, and hydrogen as a fuel for freight vehicles.
- PlA's National Drive Electric Week virtual ride and drive events in fall 2020 in Richmond, San Luis Obispo, Davis, San Diego, and Marin County.

Finally, in 2020, Electrify America continued its nationwide branded marketing campaign, using digital media (digital display, paid social, streaming audio/podcasts, online video and direct television assets, and ongoing social media efforts across Twitter, Facebook, YouTube, and Instagram) to increase utilization of Electrify America's charging infrastructure and awareness of the Electrify America brand. Key campaign messages strove to build range confidence and demonstrate to both EV drivers and those considering an EV purchase that Electrify America's DC fast-charging network could provide them with the same freedom to travel as gasoline-powered vehicles. There were a handful of campaign pauses due to Facebook boycotts, wildfires, and COVID-19, but those pauses did not impact Electrify America's ability to drive station utilization, membership sign-ups, and app downloads over the course of the year, and the Cycle 2 branded campaign delivered over 137 million impressions in California.

Electrify America Cycle 2 Spending Forecast

The Consent Decree requires VW, through Electrify America, to incur $400 million in creditable costs by the end of December 2021, including $200 million in Cycle 2. VW has notified the United States Department of Justice (U.S. DOJ), the United States Environmental Protection Agency (U.S. EPA), the California Attorney General's Office (AGO), and CARB that it may experience a shortfall in infrastructure spending due to delays in charging station investments as a result of the COVID-19 pandemic, and thus may need to request an extension to May 31, 2022 to complete infrastructure projects and spending. The agencies will consider whether to grant the extension based on the information VW and Electrify America submit.

Total Expenditures

Tables 6 and 7 on the following pages reflect Electrify America's expenditures under the Cycle 1 and Cycle 2 ZEV Investment Plans, respectively, through December 31, 2020, as reported in its 2020 Annual Report.[16] The independent, third-party auditor has confirmed that these expenditures were made consistent with the Consent Decree and Plan approvals.

[16] Electrify America, 2021. 2020 Annual Report to California Air Resources Board, April 30, 2021. (https://ww2.arb.ca.gov/resources/documents/electrify-america-reports)

Table 6: Electrify America's Cycle 1 ZEV Investment Plan Creditable Expenditures*

Investment Category	Amounts/Expenditures	Description	Low-income / DAC Spend
ZEV Infrastructure	Begin: $120,000,000 Expended: $120,000,000 Remaining: $0	Install, operate, and maintain highway and community charging stations.	Electrify America has demonstrated to CARB staff that, for each of the three spending categories, Cycle 1 cumulative creditable costs in disadvantaged and low-income communities exceeded 35 percent. However, Electrify America considers its specific disadvantaged and low-income community spending levels and percentage of its investments, as contained in its creditable cost reports, to be confidential and proprietary information.
Green City ZEV Access Demonstration Project	Begin: $44,000,000 Expended: $44,000,000 Remaining: $0	Establish and market zero-emission car share and transit services.	
ZEV Awareness and Education	Begin: $20,000,000 Expended: $20,927,072 Remaining: $0	Broad social, web-based, and traditional media brand-neutral awareness program.	
Administration	Begin: $16,000,000 Expended: $16,195,464 Remaining: $0	Overhead expenses include personnel, service agreement, office/facility, legal, and related costs, as provided for in the Consent Decree.	
Total:	Begin: $200,000,000 Expended: $201,122,536[17] Remaining: $0		

* Table 6 accounts for Cycle 1 creditable expenditures through December 31, 2020.

[17] The Consent Decree requires that $200 million be spent in each spending cycle. Expenditures in excess of that amount are not creditable unless approved in writing by CARB.

Table 7: Electrify America's Cycle 2 ZEV Investment Plan Creditable Expenditures*

Investment Category	Amounts/Expenditures		Description	Low-income / DAC Spend
ZEV Infrastructure	Begin: Expended: Remaining:	$153,000,000 $85,483,940 $67,516,060	Install, operate, and maintain highway and community charging stations.	Electrify America has demonstrated to CARB staff that, for each of the three spending categories, Cycle 2 creditable costs through 2020 in disadvantaged and low-income communities exceeded 35 percent. However, Electrify America considers its specific disadvantaged and low-income community spending levels and percentage of its investments, as contained in its creditable cost reports, to be confidential and proprietary information.
Public Education, Awareness and Marketing	Begin: Expended: Remaining:	$27,000,000 $17,059,839 $9,940,161	Broad social, web-based, and traditional media brand-neutral awareness program. Market charger locations, charging speed, acceptable payment methods, amenities, accessibility, and affordability (subscription plans and automaker bundling).	
Administration	Begin: Expended: Remaining:	$20,000,000 $7,005,658 $13,457,723	Overhead expenses include personnel, service agreement, office/facility, legal, and related costs as provided for in the Consent Decree.	
Total:	Begin: Expended: Remaining:	$200,000,000 $109,549,437 $90,450,563		

* Table 7 accounts for Cycle 2 creditable expenditures through December 31, 2020.

Low-Income or Disadvantaged Community Benefits

As described in Tables 6 and 7, Electrify America has provided CARB staff with confidential expenditure information demonstrating that Cycle 1 and Cycle 2 ZEV Investment Plan spending in each of the investment categories meets or exceeds the 35 percent target set by SB 92 for benefiting low-income or disadvantaged communities disproportionately impacted by air pollution.

CARB staff will continue to oversee Electrify America's ZEV Investment Plan spending, and will strive to ensure that, to the maximum extent allowable under the 2.0-Liter Partial Consent Decree, at least 35 percent of Investment Plan funds benefit low-income or disadvantaged communities disproportionately affected by air pollution, as required by SB 92.

VW Environmental Mitigation Trust – Consent Decree Appendix D

This section focuses on Appendix D of the VW settlement Consent Decree: The Environmental Mitigation Trust (VW Mitigation Trust or Trust). The Trust is intended to fully mitigate past and future excess oxides of nitrogen (NOx) emissions from the VW vehicles that were the subject of the settlement. Under the terms of the Consent Decree, VW paid $2.7 billion into a national Environmental Mitigation Trust for specified eligible mitigation actions. Wilmington Trust, N.A., is the trustee for the national Trust, which is allocated to each of the 50 states, the District of Columbia, and Puerto Rico, based on the respective number of VW vehicles that were the subject of the settlement. California's total allocation of the Trust from both the 2.0-liter and 3.0-liter vehicle Consent Decrees is about $423 million.[18] The eligible mitigation actions (project funding categories) listed in the Consent Decree include mostly scrap-and-replace projects for the heavy-duty sector.

Public Process

As the Lead Agency for implementing California's Trust allocation, CARB was responsible for developing a Beneficiary Mitigation Plan that describes how California's Trust allocation will be spent, including the goals for the use of the funds; the eligible mitigation actions to be funded and the corresponding allocations; the estimated emission reductions; and consideration of the emissions benefits for areas disproportionately impacted by air pollution. CARB developed the Beneficiary Mitigation Plan through an extensive public process, and the Board approved the plan at its public meeting on May 25, 2018 and reported the Plan to the Trustee in June 2018. To develop the Beneficiary Mitigation Plan, CARB staff held 8 public meetings over a 7-month period in 2017 and 2018. Following the Plan approval, the project administrators, in coordination with CARB staff, held 6 public work group meetings throughout the State to solicit feedback from stakeholders on designing the implementation process and application requirements for each of the 5 Board-approved project funding categories.

The funding described in the Beneficiary Mitigation Plan complements a portfolio of other clean transportation investments from CARB, other State agencies, and local governments. There will be considerable investment in heavy-duty vehicle emission reductions through the Beneficiary Mitigation Plan and through continued implementation of the Carl Moyer Program, Low Carbon Transportation Investments, the Proposition 1B Goods Movement Emission Reduction Program, Funding Agricultural Replacement Measures for Emission Reductions (FARMER), and the Community Air Protection Program (Assembly Bill 617). The next section describes the projects that are being funded from the Beneficiary Mitigation Plan.

Proposed and Actual Trust Expenditures

California's Trust expenditures are expected to fully mitigate the excess NOx caused by the subject VW diesel vehicles in California. Staff calculated the estimated initial NOx target as 10,000 tons and will evaluate potential adjustments to the target as updated information

[18] California's total Trust allocation is $422,636,320.

becomes available. The estimate takes into account the VW diesel car recall or buy-back requirements in the Consent Decrees, the uncertainty in heavy-duty vehicle or technology market demand, the mix of projects within the specified project funding categories that could be funded, and infrastructure needs. The project funding categories and allocations included in the Plan are expected to fully mitigate NOx emissions.

Table 8 shows the project funding categories and allocations the Board approved in the Beneficiary Mitigation Plan.

Table 8: Project Funding Categories and Allocations

Eligible Mitigation Action Project Funding Category	**Benefiting Low-Income or Disadvantaged Communities**	**Project Allocation** (millions)
Zero-Emission Transit, School, and Shuttle Buses	50%	$130
Zero-Emission Class 8 Freight and Port Drayage Trucks	50%	$90
Zero-Emission Freight and Marine Projects Forklifts and Port Cargo Handling Equipment Airport Ground Support Equipment Oceangoing Vessel Shore Power Zero-Emission Ferry, Tugboat, and Towboat Repowers	75%	$70
Combustion Freight and Marine Projects Low NOx Class 7-8 Freight Trucks Tier 4 Freight Switchers Tier 4 or Hybrid Ferry, Tugboat, and Towboat Repowers	50%	$60
Light-Duty Zero-Emission Vehicle Infrastructure	35%	$10
Reserve (including administrative costs)		**$63**
TOTAL	**> 50%**	**$423**

These investments will:

- Fully mitigate the lifetime excess NOx caused by the subject VW diesel vehicles while reducing risk to children and other sensitive populations.
- Support early adoption of commercially available zero-emission technologies in the heavy-duty sector.
- Align with State priorities and help meet California's zero-emission vehicle and petroleum use reduction goals.
- Invest funds statewide with a focus on benefiting low-income or disadvantaged communities.

The following sections describe the project funding categories and expenditures and current status of each. As required by the Consent Decree, for each funded vehicle or engine in each of the categories, the existing eligible vehicle or engine must be scrapped.

Zero-Emission Transit, School, and Shuttle Buses: $130 Million

Funding for this category is being used to scrap and replace older, eligible Class 4-8 conventionally fueled transit, shuttle, and school buses with new, commercially available zero-emission buses, supporting early adoption of zero-emission technologies and reducing diesel's harmful impacts on children. The funding is being implemented in two equal installments of $65 million each, released at least two years apart, and is being made available on a first-come, first-served basis. For each vehicle funded, the incentive amount includes funding to help offset zero-emission vehicle infrastructure costs. No more than 50 percent of each installment may go to one bus category. Staff expects at least 50 percent of the total project funds will benefit low-income or disadvantaged communities.

The San Joaquin Valley Air Pollution Control District (SJVAPCD) is administering this funding category statewide with CARB oversight. SJVAPCD conducted public work group meetings throughout the State in spring 2019 to seek input on the application process and requirements, with the intent of developing a streamlined funding process. SJVAPCD opened the first statewide $65 million funding opportunity in October 2019. Funding requests for school buses quickly exceeded the 50 percent bus category threshold described above. The table below shows the total funding requests received for all bus categories as of December 31, 2020.

Table 9: Zero-Emission Bus Applications Received[19]

Category	Number of Vehicles	Funds Requested
School Bus	541	$216,400,000
Transit Bus	157	$33,100,000
Shuttle Bus	60	$9,600,000
Total	758	$259,100,000

Table 10 below shows the contracted funding for zero-emission buses as of December 31, 2020. The SJVAPCD is continuing to enter into contracts with selected grantees for the remaining funding from the first installment.

[19] Not all applications result in funded projects, as eligibility, contracting, and cost-share requirements may affect funding. Future reports will include information on funded projects as they occur.

Table 10: Zero-Emission Bus Funding Awarded as of December 31, 2020

Category	Number of Vehicles	Funding Awarded	Percentage in Low-Income or Disadvantaged Communities
School Bus	52	$20,774,777	77%
Transit Bus	20	$6,900,000	100%
Shuttle Bus	3	$467,510	34%
Total	75	$28,142,287	82%

Project administrators have created a public website to track awarded funds for all projects.[20] The site is updated regularly and will soon feature additional tools to display where funded vehicles and equipment are being deployed.

The second installment of funding ($65 million) is expected to be released in late 2021 or early 2022. Staff are considering options for addressing the high demand for school bus funding in consideration of the need to meet the required NOx emission reduction target.

To cover current costs, and in anticipation of upcoming costs, the Trustee has approved and disbursed $57,120,000 for vehicle purchases and about $3,880,000 for administrative costs. Contracts with awardees are underway, and the first few buses were delivered in 2020. Since inception, the project administrator and CARB have expended about $1,070,000 of the amount disbursed for administrative costs. This includes, but is not limited to, project development, staffing costs for statewide public meetings, application process development, travel, outreach (including website development), developing a database for tracking fund distribution and emission reductions, recordkeeping, and reporting.

Zero-Emission Class 8 Freight and Port Drayage Trucks: $90 Million

Funding for this category is being used to replace eligible Class 8 conventionally fueled freight trucks and port drayage trucks with new zero-emission technologies. While a portion of this allocation will support the early deployment of existing commercially available trucks, 70 percent of the allocation will be focused on expanding the market as manufacturers bring additional zero-emission trucks to market in the next several years.

Funds are being made available on a first-come, first-served basis. For each vehicle funded, the incentive amount includes funding to help offset zero-emission vehicle infrastructure costs. Staff expects at least 50 percent of the total project funds will benefit low-income or disadvantaged communities.

The South Coast Air Quality Management District (SCAQMD) is administering this funding category statewide with CARB oversight. SCAQMD conducted public work group meetings

[20] California's VW Environmental Mitigation Trust Results website: https://www.californiavwtrust.org/

throughout the State in spring 2019 to seek input on the application process and requirements, with the intent of developing a streamlined funding process. SCAQMD released the first statewide $27 million installment (30 percent of the allocation for this project funding category) in summer 2020. The funding was oversubscribed within the first week, indicating a strong demand for commercially-available Class 8 trucks. The table below shows the total funding requests received as of December 31, 2020.

Table 11: Zero-Emission Class 8 Truck Applications Received[21]

Category	Number of Vehicles	Funds Requested
Drayage Trucks	43	$7,493,456
Freight Trucks	149	$29,149,131
Waste Haulers	59	$11,429,105
Total	251	$48,071,692

To cover current costs, and in anticipation of upcoming costs, the Trustee has approved and disbursed $6,750,000 for vehicle purchases and about $1,750,000 for administrative costs through December 2020. The project administrator and CARB have expended the administrative costs to support implementation, including, but not limited to, project development, staffing costs for statewide public meetings, application process development, travel, outreach (including website development), developing a database for tracking fund distribution and emission reductions, recordkeeping, and reporting.

Zero-Emission Freight and Marine Projects: $70 Million

Funding for this category is being used to replace eligible airport ground support equipment (GSE), forklifts, and port cargo handling equipment with new, commercially available, zero-emission technologies and to install oceangoing vessel shore power systems at port terminals. Zero-emission repowers for ferries, tug boats, and tow boats are also eligible. The goal of this project category is to maximize NOx reductions by funding the most cost-effective zero-emission freight or marine projects.

These funds are being administered in two equal increments of $35 million, two years apart, so that CARB can monitor progress and adjust the implementation of the project category as needed. At least 75 percent of this allocation will benefit low-income or disadvantaged communities.

The Bay Area Air Quality Management District (BAAQMD) is administering this funding category statewide. BAAQMD conducted public work group meetings throughout the State in spring 2019 to seek input on the solicitation process and requirements. BAAQMD released a competitive solicitation for the first statewide $35 million installment in June 2020 with a

[21] Not all applications result in funded projects, as eligibility, contracting, and cost-share requirements may affect funding. Future reports will include information on funded projects as they occur.

closing date in August 2020. The funding was undersubscribed, with about $8 million in project applications received. Contributing factors include the COVID-19 pandemic's impacts on maritime ports[22] and airports, the two primary sectors eligible for the funding, coupled with the early stage of zero-emission technology adoption in the off-road and marine sectors. The table below shows the total funding requests from the first competitive solicitation.

Table 12: Zero-Emission Freight and Marine Applications Received[23]

Category	Number of Vehicles/Equipment	Funds Requested
Heavy-Lift Forklifts/Cargo Handling Equipment	8	$900,524
Airport Ground Support Equipment	6	$557,652
Ferry/Tug/Tow Repowers	2	$4,635,523
Shore Power	2	$2,073,484
Total	18	$8,167,183

BAAQMD staff are re-soliciting the remaining funds from the first installment in second quarter 2021. The new solicitation will move to a first-come/first-served model to streamline the application process and will include additional statewide outreach efforts.

To cover current costs, and in anticipation of upcoming costs, the Trustee has approved and disbursed about $2,100,000 for administrative costs. Since inception, the project administrator and CARB have expended about $1,185,000 of the amount disbursed for administrative costs. This includes, but is not limi5ted to, project development, staffing costs for statewide public meetings, solicitation and application process development, travel, outreach (including website development), developing a database for tracking fund distribution and emission reductions, recordkeeping, and reporting.

Combustion Freight and Marine Projects: $60 Million

Funding for this category is being used to replace eligible Class 7 and 8 freight trucks, including waste haulers, dump trucks, and concrete mixers, or their engines, freight switcher locomotives or their engines, and ferry, tugboat, and towboat engines, with the cleanest commercially available internal combustion or hybrid technologies. The goal of this project category is to maximize NOx reductions by funding the most cost-effective, lowest emission engine projects. Eligible trucks may be replaced or repowered with low NOx engines only.

This category funding is being allocated in two installments of $30 million each, two years apart, so that CARB can monitor progress and adjust as needed to ensure staying on track

[22] PortStrategy, California Ports Cautious After Volume Loss, June 11, 2020. https://www.portstrategy.com/news101/world/americas/california-ports-cautious-after-volume-loss

[23] Not all applications result in funded projects, as eligibility, contracting, and cost-share requirements may affect funding. Future reports will include information on funded projects as they occur.

with the NOx emission reduction targets, as described in the Beneficiary Mitigation Plan. Staff expects that at least 50 percent of this allocation will benefit low-income or disadvantaged communities.

SCAQMD is administering this funding category statewide. SCAQMD conducted public work group meetings throughout the State in spring 2019 to seek input on the solicitation process and requirements. SCAQMD released a competitive solicitation for the first statewide $30 million installment in December 2019, with a closing date in March 2020. The funding was undersubscribed, with about $7 million in project applications received. Contributing factors include funding available from other programs at the time the solicitation was open, and prospective applicants' potential hesitancy to apply for funding at the start of a global pandemic. The table below shows the total funding requests from the first competitive solicitation.

Table 13: Combustion Freight and Marine Applications Received[24]

Category	Number of Vehicles/Equipment	Funds Requested
Low NOx Freight Trucks	29	$1,452,600
Low NOx Drayage Trucks	34	$1,898,747
Low NOx Waste Haulers	33	$3,070,000
Marine Engines	2	$1,000,000
Total	98	$7,421,347

SCAQMD staff are working to re-solicit the remaining funds from the first installment in second quarter 2021. The new solicitation will move to a first-come/first-served model to streamline the application process and will include additional statewide outreach efforts.

To cover current costs, and in anticipation of upcoming costs, the Trustee has approved and disbursed about $2,860,000 for administrative costs. Since inception, the project administrator and CARB have expended about $1,290,000 of the amount disbursed for administrative costs. This includes, but is not limited to, project development, staffing costs for statewide public meetings, solicitation and application process development, travel, outreach (including website development), developing a database for tracking fund distribution and emission reductions, recordkeeping, and reporting.

[24] Not all applications result in funded projects, as eligibility, contracting, and cost-share requirements may affect funding. Future reports will include information on funded projects as they occur.

Light-Duty Zero-Emission Vehicle Infrastructure: $10 Million

Funding for this category is being used for fueling infrastructure for light-duty zero-emission vehicles (ZEVs), with a target of $5 million for charging stations and $5 million for hydrogen fueling stations. This allocation provides funding to help purchase, install, operate, and maintain new charging stations for battery electric vehicles.

Staff will encourage applicants to combine this funding with other available funding sources at the state, federal, and local level. These funds are being administered statewide using a competitive process and will support projects that meet the fueling needs of a growing ZEV fleet and help fill gaps not met by other funding programs. At least 35 percent of this allocation is expected to benefit low-income or disadvantaged communities.

BAAQMD is administering this funding category statewide. BAAQMD conducted public work group meetings throughout the State in spring 2019 to seek input on the application process and requirements. BAAQMD and CARB staff have been working with the California Energy Commission, the Governor's Office of Business and Economic Development, and other agencies to coordinate funding efforts. The $5 million in funding for hydrogen fueling stations is augmenting the $45.7 million available through the California Energy Commission's grant funding opportunity released in January 2020. The 5 hydrogen fueling stations in the table below have been preliminarily selected for $1 million in funding each from the VW Mitigation Trust. The applicant is FirstElement Fuel, Inc., and all proposed stations are located in disadvantaged or low-income communities.

Table 14: Proposed Hydrogen Fueling Station Awards

Proposed Station Address	City	Proposed Award
2160 South Euclid Avenue	Ontario	$1,000,000
510 East Santa Clara Street	San Jose	$1,000,000
1930 South Waterman Avenue	San Bernardino	$1,000,000
3160 Carlson Boulevard	El Cerrito	$1,000,000
6392 Beach Boulevard	Buena Park	$1,000,000

BAAQMD released a competitive statewide solicitation for the $5 million in funding for charging stations in May 2021. The application period will close July 15, 2021.

To cover current costs, and in anticipation of upcoming costs, the Trustee has approved and disbursed about $1,070,000 for administrative costs. Since inception, the project administrator and CARB have expended about $210,000 of the amount disbursed for administrative costs. This includes, but is not limited to, project development, staffing costs for statewide public meetings, solicitation and application process development, travel, outreach (including website development), developing a database for tracking fund distribution and emission reductions, recordkeeping, and reporting.

Reserve: $63 Million

The Beneficiary Mitigation Plan allocates $63 million (15 percent of the State's Trust allocation) for a reserve that will be used to cover administrative costs associated with implementing the project funding categories above and to fund additional projects. The Consent Decree allows expending up to 15 percent of the State's allocation on administrative costs, including those expended by project administrators and CARB. CARB does not expect to use the entirety of those funds on administration; the amount has been reserved to also provide funding for additional projects to ensure meeting the NOx mitigation target. Any interest earned from the Trust will also be placed in this category to be used to fund additional projects and corresponding administrative costs. Interest earned by project administrators will be calculated separately and will remain within each respective project funding category, with 90 percent going towards projects and 10 percent towards associated administrative costs.

As indicated in the project funding category descriptions above, California's three largest air districts are administering, on a statewide basis, the project funding categories shown in Table 15. Each of these air districts have extensive experience administering public funds for air quality improvement programs and are well-suited for the respective project funding categories.

Table 15: Project Funding Category Statewide Administration

Eligible Mitigation Action Project Funding Category	Statewide Administrator
Zero-Emission Freight and Marine Projects	Bay Area Air Quality Management District
Light-Duty Zero-Emission Vehicle Infrastructure	
Zero-Emission Transit, School, and Shuttle Buses	San Joaquin Valley Air Pollution Control District
Zero-Emission Class 8 Freight and Port Drayage Trucks	South Coast Air Quality Management District
Combustion Freight and Marine Projects	

Administrators are responsible for a wide range of tasks associated with implementing funding from the project funding categories. These include, but are not limited to, conducting public meetings to determine implementation details and funding application requirements; outreach, including targeted outreach for low-income or disadvantaged communities; developing solicitations or application materials; processing and scoring applications for project selection; tracking expenditures; calculating actual emission reductions; conducting inspections for scrapped vehicles and engines; record keeping; and reporting to CARB. CARB will oversee project administration and will conduct programmatic reviews and fiscal audits.

Total Expenditures

Table 16 includes an accounting of the State's Trust funds for this first reporting period. As of December 31, 2020, about $64,000,000 has been disbursed from the Trust for vehicles, engines, or equipment. Projects are still in the early stages of implementation, and funds are typically not disbursed to the project administrator until after project scoring and selections have occurred, and the project administrator is preparing to enter into a contract with the selected grantee. About $10,000,000 has been disbursed from the Trust for administrative costs, much of which includes the more intensive program development and project start-up costs.

For each project funding category, Table 16 includes the beginning balance (proposed expenditures), the actual expenditures, and the remaining balance. In this report, "actual expenditures" refers to amounts disbursed to the State or its third-party administrators from the Trust and not actual liquidation by the State or third party. Once funding is expended from the Trust, it is available to fund completed vehicle and equipment projects and support administration of the program. It is important to note that California's allocation of the national Trust was $422,636,320, which has been rounded for the sake of the Beneficiary Mitigation Plan and this report to $423 million. Therefore, the project funding category amounts were also rounded.

All states who are beneficiaries of the Trust have balances that are subject to fluctuations based on the Trustee's investment of the monies and their market value, as well as fees and other Trust-related expenses. The "Cumulative Totals" shown at the bottom of the table reflect the original amount of California's allocation; the total cumulative amount of net earnings from the Trust through December 31, 2020; the total cumulative amount expended through December 31, 2020; and the total funds remaining (closing market value with accrued income). The table also includes the remaining balance at the beginning of the current reporting period, as reported by the Trustee on January 1, 2020, reflecting the opening market value with accrued income; the amount of net earnings in the current reporting period; the amount of State expenditures in the current reporting period; and the ending balance (closing market value with accrued income). All amounts in Table 16 are rounded to the nearest dollar.

Table 16: California's VW Mitigation Trust Expenditures as of December 31, 2020

Project Funding Category	Amounts/Expenditures		Description	Status
Zero-Emission Transit, School, & Shuttle Buses	Begin:[1] Disbursed: Remaining:	$130,000,000 $57,120,000 $72,880,000	Replace existing diesel buses with zero-emission technologies; no more than 50% of funds to one bus category; first-come/ first-served.	First $65 million statewide installment was released in October 2019; about $60 million is committed, and bus purchases are underway.
Zero-Emission Class 8 Freight and Port Drayage Trucks	Begin:[1] Disbursed: Remaining:	$90,000,000 $6,750,000 $83,250,000	Replace existing diesel Class 8 freight and port drayage trucks with zero-emission technologies; first-come/first-served.	First $27 million statewide installment was released in summer 2020; contracts for vehicle purchases are underway.
Zero-Emission Freight and Marine Projects	Begin:[1] Disbursed: Remaining:	$70,000,000 $0 $70,000,000	Fund most cost-effective, zero-emission projects in freight and marine sectors; competitive solicitation.	Solicitation for first $35 million statewide installment was released in summer 2020 and was undersubscribed; solicitation will be re-released with modifications in 2021.
Combustion Freight and Marine Projects	Begin:[1] Disbursed: Remaining:	$60,000,000 $0 $60,000,000	Fund most cost-effective, clean combustion projects in freight and marine sectors; competitive solicitation.	Solicitation for first $30 million statewide installment was released in December 2019 and was undersubscribed; solicitation will be re-released with modifications in 2021.
Light-Duty Zero-Emission Vehicle Infrastructure	Begin:[1] Disbursed: Remaining:	$10,000,000 $0 $10,000,000	Purchase, install, operate, and maintain new charging and fueling stations for light-duty zero-emission vehicles.	Statewide solicitation for hydrogen stations ($5 million) was released in 2020; all funds are committed. Solicitation for charging stations ($5 million) will be released in 2021.
Reserve (including administrative costs)	Begin:[1] Disbursed: Remaining:	$63,000,000 $10,583,450 $52,416,550	Fund administrative costs for above projects; fund additional projects needed to meet NOx emission reduction target.	CARB and statewide administrators are currently engaged in implementation, including solicitations, project selection and administration, recordkeeping, and reporting.
Cumulative Totals:	Begin: Earned:[2] Disbursed: Remaining:	$422,636,320 $37,120,826 $74,453,450 $366,510,889	**Current Reporting Period** (1/1/2020 through 12/31/2020)**:**	Begin: $403,843,513 Earned:[2] $5,270,826 Disbursed: $42,603,450 Remaining: $366,510,889

[1] The beginning amounts for each project funding category are those reflected in the Beneficiary Mitigation Plan; the Plan used rounded numbers to correspond to California's rounded total Trust allocation of $423 million. All other amounts in the table above are rounded to the nearest dollar.

[2] The net amount of earnings at current market value after subtracting fees and other Trust-related deductions.

Low-Income or Disadvantaged Community Benefits

As shown in Table 8 on page 23, each project funding category will meet or exceed the 35 percent target set by SB 92 for benefiting low-income or disadvantaged communities. In fact, CARB expects more than 50 percent of California's Trust allocation will benefit these communities that are disproportionately impacted by air pollution. Project funding categories that are competitively solicited include criteria requiring low-income or disadvantaged community benefits. For first-come, first-served project funding categories, staff based its projections on an evaluation of historical participation data from other first-come, first-served zero-emission heavy-duty vehicle incentives. As projects are implemented and funds are expended, CARB staff will track and annually report these benefits for each project funding category. Project administrators have created a public website to track awarded funds for all projects.[25] The site is updated regularly and will soon feature additional tools to display where funded vehicles and equipment are being deployed.

The table below shows the percentages of funds benefiting these communities for the project categories that have data to report as of December 31, 2020. To ensure the most accurate reporting, only projects that have entered into contracts are included.

Table 17: Percentage of Contracted Project Funding Benefiting Disadvantaged or Low-Income Communities as of December 31, 2020

Project Funding Category	Contracted Project Funding	Current Percentage Benefiting Disadvantaged or Low-Income Communities[26]
Zero-Emission Transit, School, and Shuttle Buses	$28,142,287	82%

In order to maintain consistency with legislation that defined low-income and disadvantaged communities and California Climate Investment implementation, staff will use the low-income and disadvantaged community designations previously made by the California Environmental Protection Agency (CalEPA) with the California Communities Environmental Health Screening Tool 3.0 (CalEnviroScreen), as well as guidelines CARB continues to develop for State agencies implementing California Climate Investments. While project implementation is still in the early stages, CARB staff will continue to monitor fund expenditures and low-income and disadvantaged community benefits. Future annual reports will include an ongoing assessment of these expenditures and benefits.

[25] California's VW Environmental Mitigation Trust Results website: https://www.californiavwtrust.org/

[26] For each subsequent annual report, staff will update the percentage of funding benefiting disadvantaged or low-income communities as more projects are funded.