



ANNUAL REPORT

2019

Senate Bill 92 (Committee on Budgets 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



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EXECUTIVE SUMMARY



Senate Bill (SB) 92 (Committee on Budgets 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 Volkswagen (VW) settlement, specifically, Appendices C and D of the 2.0-Liter Partial Consent Decree.¹ The VW settlement is the result of VW's use of illegal defeat devices – software designed to cheat on emissions tests – in certain 2009 to 2016 model year diesel cars that were sold in California. This report serves as the first annual update, covering implementation through December 31, 2018.

A. VW Settlement Requirements in Appendices C and D

Under the terms of the VW settlement, VW will fund more than \$1.2 billion in California over the next 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 stations), ZEV public awareness, increased ZEV access, and Green City demonstration 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 demonstration project to be located in a city with a population of about 500,000 and consisting primarily of disadvantaged communities.

- Appendix D, the Environmental Mitigation Trust, is intended to fully mitigate all past and future excess 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 in implementing Appendices C and D

SB 92 establishes several requirements for Appendix C and Appendix 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 believes it has complied with all requirements and direction provided by the Legislature in SB 92.

One requirement in SB 92 that applies to both appendices is that CARB strives 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 and California's Beneficiary Mitigation Plan expenditures align with the State's transportation electrification goals, 2025 and 2030 ZEV goals, and statutory climate pollutant goals that include reducing greenhouse gas emissions 40 percent below 1990 levels by 2030. Electrify America's ZEV Investment Plans fund light-, medium-, and heavy-duty electrified vehicles and charging infrastructure. The Beneficiary Mitigation Plan will fund 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 ZEV Investment Plans achieve this goal by 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 strives to provide for public transparency before approval of Appendix C investments

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.

and Appendix D expenditures. To date, CARB has approved the first two of four ZEV Investment Plans required by Appendix C, 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 it applies to Appendix C, SB 92 further prescribes that:

- CARB strives to ensure that, to the maximum extent allowable under the 2.0-Liter Partial Consent Decree, in approving a ZEV Investment Plan, at least 35 percent of funds for the Investment Plan benefit low-income or disadvantaged communities disproportionately affected by air pollution;
- CARB strives to ensure that, to the maximum extent allowable under the 2.0-Liter Partial Consent Decree, Volkswagen or its subsidiary periodically submit progress reports to CARB on the implementation of the approved ZEV Investment Plan;
- CARB approves each ZEV Investment Plan at a public hearing;
- CARB posts each proposed ZEV Investment Plan for public comment; and
- CARB reports 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 strives 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.

The remainder of this report addresses how CARB meets the statutory requirements provided in the bullets above. This first report reflects progress made during this early stage of implementation. As implementation investments grow, CARB staff will have much more investment and expenditure information on which to report. CARB staff will continue to ensure compliance with SB 92.

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 of approximately 70,000 2.0-liter high-emitting diesel vehicles in California that VW marketed 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 the Board, 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 stations), public awareness, increasing ZEV access, and the establishment of two "Green Cities," with emphasis on transportation electrification projects like zero-emission freight and zero-emission car sharing and transit that increase mobility.

In addition to those requirements established under the 2.0-Liter Partial Consent Decree and SB 92, the Board, via Resolution 17-23, has expressed 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, reports to the Board at least twice a year on progress towards achieving the objectives of the Consent Decree.⁴

⁴ The last report to the Board was in December 2018 as part of Board approval of the Cycle 2 ZEV Investment Plan (slides 13-14 of <https://www.arb.ca.gov/board/books/2018/121318/18-10-9pres.pdf>)

PUBLIC PROCESS

CARB has now approved the Cycle 1 and Cycle 2 ZEV Investment Plans. Prior to approval of both the Cycle 1 and Cycle 2 Plans, CARB conducted an extensive public process to inform decision-making on, implementation of, and oversight of Electrify America's ZEV Investment Plans. From that process, which included an early workshop, the release of a Guidance Document, and three Board meetings, CARB solidified reporting and disadvantaged community spending commitments from Electrify America. 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 included additional foundational meetings. During those meetings, staff educated the public on the 2.0--Liter Partial Consent Decree and solicited input that was used to develop CARB'S guiding principles to Electrify America for all investment plan cycles.

Subsequent to approval of the Cycle 1 Plan, Electrify America began meeting with CARB monthly to discuss the implementation status of the Cycle 1 Plan and, later, proposed content for a Cycle 2 Plan. Electrify America and CARB continue to meet monthly to discuss implementation status of both the Cycle 1 and Cycle 2 Plans. Electrify America also provides CARB written quarterly update reports, and submitted its first and second annual reports on April 30, 2018, and April 30, 2019, respectively.

Table 1: Cycle 1 Plan Public Process

Date	Venue	Information Provided
December 2, 2016	Public Workshop	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 Plan.
December 8, 2016	Board Meeting	Updated the Board on the Consent Decree, describing the content and different functions of the Appendices, identifying CARB's priorities and guidance for the Cycle 1 Plan. Summarized common themes from the public comments that were received at the December 2, 2016, workshop.
February 10, 2017	Posted Document transmittal	CARB transmitted a Guidance Document ⁵ 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.
March 14, 2017	Posted Plan	CARB posted Electrify America's proposed Cycle 1 ZEV Investment Plan ⁶ for a four-week public comment period.
March 24, 2017	Board Meeting	Provided an overview of the proposed Cycle 1 Plan. 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 solicit additional information from Electrify America addressing the concerns regarding the submitted Cycle 1 Plan.
May 24, 2017	Posted Request for Supplement	CARB outlined concerns about the proposed Cycle 1 Plan and requested that Electrify America submit a Plan Supplement that more thoroughly characterized those components of the Plan that address disadvantaged communities, brand neutral infrastructure and education, and a long-term investment planning vision. Electrify America submitted a Plan Supplement to address this request on June 29, 2017.
July 27, 2017	Board Meeting	Staff provided an overview of Electrify America's proposed Cycle 1 Plan – including Supplement – as submitted on June 29, 2017, and made available for public comment; the Board approved it.

Table 2: Cycle 2 Plan Public Process

Date	Venue	Information Provided
October 3, 2018	Posted Plan	CARB posted Electrify America's proposed Cycle 2 ZEV Investment Plan for public comment.
November 15, 2018	Board Meeting	Provided an overview of the proposed Cycle 2 Plan. The Board did not have a quorum to vote on the Plan, but 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.
December 7, 2018	Public Meeting	Solicited additional comments from stakeholders regarding Electrify America's progress toward achieving the objectives of the 2.0-liter Partial Consent Decree.
December 13, 2018	Board Meeting	Provided an overview of the proposed Cycle 2 Plan and stakeholder feedback; the Board approves 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 covers the 30-month period concluding 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 further refined during an extensive public process. The proposed investments are further described after the table.

⁵ 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://www.arb.ca.gov/msprog/vw_info/vsi/vw-zevinvest/documents/carb_guidance_021017.pdf)

⁶ Electrify America, 2017. California ZEV Investment Plan: Cycle 1, March 8, 2017.

(https://www.arb.ca.gov/msprog/vw_info/vsi/vw-zevinvest/documents/vwinvestplan1_031317.pdf)

Table 3: Approved Cycle 1 Plan Investments

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

ZERO-EMISSION VEHICLE INFRASTRUCTURE: \$120 MILLION



Image source: Electrify America News Update, December 13, 2018.

The majority of this investment – \$75 million – is being used to install a statewide network of highway fast-charging stations that will serve all of California’s plug-in drivers and allow for ultra-fast refueling – 200 miles in 15-30 minutes. The remainder of this investment is being 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: Los Angeles-Long Beach-Anaheim, Sacramento-Roseville-Arden Arcade, San Diego-Carlsbad-San Marcos, San Francisco-Oakland-Hayward, San Jose-Sunnyvale-Santa Clara, and Fresno. Electrify America’s planned California highway and municipal charging network will include approximately 160 fast-charging stations and 235 Level 2 stations. Electrify America projects that 50 percent of its highway stations and at least 35 percent of its metropolitan area stations will be in low-income or disadvantaged community census tracts. To date, Electrify America has licensed or leased 127 station sites, 72 are in the permitting process, and 35 have been permitted. Site work is complete on 9, of which 56 percent are in low-income or disadvantaged community census tracts, and 3 have been commissioned – Elk Grove, Livermore, and Torrance. Additionally, Electrify America vendors have signed site host agreements for 128 Level 2 charging sites in California and the first 15 are operational, of which 5 are in low-income or disadvantaged community census tracts.

GREEN CITY ZEV ACCESS DEMONSTRATION PROJECT (SACRAMENTO): \$44 MILLION

The Green City investment is supporting two new car sharing services, new zero-emission shuttle and transit buses, and the associated charging infrastructure and marketing. To date, GIG Car Share has provided 100 of the planned 260 Chevrolet Bolt EVs with roof-mounted bike racks in a 13 square mile area of the city for free-float usage. Approximately 67 percent of the serviced area is comprised of low income or disadvantaged community census tracts.



Image source: CARB

Additionally, Envoy Technologies has staged a pair of Volkswagen e-Golf EVs at approximately half of the 71 apartment buildings planned for shared use projects within the city. Approximately 75 percent of these buildings are in low income or disadvantaged community census tracts. The Envoy vehicles are available for both conventional rentals as well as shared economy ride hailing activities (like those of transportation network companies Uber or Lyft). Electrify America is supporting two transit projects with Sacramento Regional Transit (SacRT) and the Yolo County Transportation District. SacRT will operate 3 micro-transit shuttle buses in the Franklin Boulevard corridor of Sacramento – an area of the city which had been without a bus line. Of the census tracts in the service territory, 84 percent are in low-income or disadvantaged communities. SacRT, in conjunction with the Yolo County Transportation District, will operate electric transit buses between the Davis and Sacramento campuses of the University of California, Davis with additional stops at Aggie Square, West Sacramento, and downtown Sacramento. The route also includes stops in low-income and disadvantaged communities. Approximately one-third of the \$44 million investment will support fast-charging for GIG Bolt EVs and transit buses and Level 2 charging for Envoy 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-Zero⁷ to grow awareness of, and use of, Sacramento's Green City programs.

⁷ Sac-to-Zero's website is at <https://sactozero.com/>

ZEV AWARENESS AND EDUCATION: \$20 MILLION



Image source: Jetstones TV Ad screen capture

Automotive market research company Strategic Vision performs an annual New Vehicle Experience Study. The study released at the end of 2016 determined that 52 percent of Californians were not aware of ZEVs. Electrify America's awareness plan is expected to generate broad brand-neutral awareness through a combination of web-based, social, and traditional (TV and radio) media. Examples include the plugintothepresent.com website,

sponsorship of Veloz' "Electric for All" social media campaign, the "Jetstones" TV commercial (which was aired in almost 8,000 census tracts across California, of which more than half were in low-income or disadvantaged communities), and a Spanish-language radio spot. Electrify America is also targeting \$2.7 million of the budget toward new partnerships with community-based organizations (CBO) that have greater access to, and credibility within, California's low-income or disadvantaged communities.⁸ To date, CBOs collaborating with Electrify America on this initiative include Valley Clean Air Now (Valley CAN), Pacific Asian Consortium in Employment (PACE), Chinese Newcomers Service Center (CNSC), Self Help for the Elderly (SHE), Liberty Hill Foundation (LHF) and GRID Alternatives. Additionally, Electrify America conducted hands-on "Discover and Drive" events in California to increase ZEV awareness in 12 California communities. These events allowed consumers to experience 6 different ZEV models, including a hydrogen fuel cell vehicle. The accompanying curriculum, offered in both English and Spanish, highlighted the benefits and cost effectiveness of ZEVs. Ultimately, Electrify America conducted 13 events, all in the first half of 2018, and 9 of the 13 were in low-income or disadvantaged communities.

⁸ Electrify America CBO press release is at <https://elam-cms-assets.s3.amazonaws.com/inline-files/Electrify%20America%20LIC%20DAC%20Education%20and%20Awareness%20Campaign.pdf>

TOTAL EXPENDITURES

Table 4 below reflects Electrify America's expenditures under the Cycle 1 ZEV Investment Plan through December 31, 2018, as reported in its 2018 Annual Report.⁹

Table 4: Electrify America's Cycle 1 ZEV Investment Plan Expenditures*

Investment Category	Amounts/Expenditures	Description	Low-income / DAC Spend
ZEV Infrastructure	Begin: \$120,000,000 Expended: \$15,662,727 Remaining: \$104,337,273	Install, operate, and maintain highway and community charging stations.	Electrify America has demonstrated to CARB staff that, for each of the three investment categories, 2018 creditable costs exceeded 35 percent. However, Electrify America considers its disadvantaged and low-income communities spending levels and percentage split, as contained in its creditable cost reports, to be confidential and proprietary information.
Green City ZEV Access Demonstration Project	Begin: \$44,000,000 Expended: \$5,540,232 Remaining: \$38,459,768	Establish and market zero-emission car share and transit services.	
ZEV Awareness and Education	Begin: \$20,000,000 Expended: \$8,455,512 Remaining: \$11,544,488	Social, web-based, and traditional media broad brand-neutral awareness program.	
Total:	Begin: \$184,000,000 Expended: \$29,658,471 Remaining: \$154,341,529		

* Table 4 accounts for Cycle 1 deliverable expenditures and the percentage of those expenditures benefitting low-income or disadvantaged communities through December 31, 2018. It does not account for the \$16 million in administrative costs allowed under the Cycle 1 ZEV Investment Plan pursuant to the Consent Decree.

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

⁹ Electrify America, 2019. 2018 Annual Report to California Air Resources Board, April 30, 2019. (<https://ww2.arb.ca.gov/resources/documents/electrify-america-reports>)

through December 31, 2021. The 2.0-Liter Partial Consent Decree provides that Volkswagen may conclude its Cycle 1 spending activities during this period without penalty. Table 5 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 further refined during a public process that included a stakeholder meeting and two Board meetings. The proposed investments are further described after the table.

Table 5: Approved Cycle 2 Plan Investments

Investment Category	Investment (millions)
ZEV Infrastructure	\$153
ZEV Awareness and Education	\$17
Boosting Station Utilization	\$10
Operational Expenses	\$20
TOTAL	\$200

ZERO-EMISSION VEHICLE INFRASTRUCTURE: \$153 MILLION



Image source: Audiusa.com
<https://www.audiusa.com/audi-life/e-tron/e-tron-taking-charge>

Most of this investment – \$95-115 million – will be used to expand charging infrastructure within the 6 metropolitan areas selected in Cycle 1 as well as in 3 new areas: Riverside-San Bernardino, Santa Cruz-Watsonville, and Santa Rosa. These nine communities are projected to account for 89 percent of the 2022 plug-in electric vehicle population. Another \$25-30 million will be used to expand primarily fast-charging infrastructure along highways and regional routes, including in three rural areas (the Central, Imperial, and Coachella Valleys) with high concentrations of low-income or disadvantaged communities. Additionally, \$8-12 million will go toward 2,500-3,300 residential Level 2 demand response-capable chargers and a website tool, integrated with CARB tools targeted toward low-income consumers, to identify existing incentives, \$4-6 million for charging infrastructure for electrified transit buses, \$2-4 million for autonomous vehicle charging to facilitate fueling the coming generation of autonomous plug-in electric vehicles (PEVs), approximately \$2 million for Level 2 charging to rural areas that have

historically been underserved by charging infrastructure¹⁰, and up to \$5 million for renewable generation that will decrease upstream emissions from electricity generation and provide for greater economic sustainability.

Electrify America, in its proposed Cycle 2 Plan, committed that at least 35 percent of its infrastructure investments will benefit low-income or disadvantaged communities. Cycle 2 Plan investments do not commence until July 1, 2019, so there are no expenditures to be quantified at this time.

ZEV AWARENESS AND EDUCATION: \$17 MILLION

In Cycle 2, Electrify America will continue to use traditional and social media to increase public awareness of ZEVs and their benefits, emphasizing the: (1) 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) diversity of vehicle choice. As awareness levels increase, Electrify America will directly target marketing at this ZEV-aware audience, using ride and drive events and, potentially, experience centers to promote even stronger ZEV consideration.



EFFORTS TO DRIVE STATION UTILIZATION: \$10 MILLION

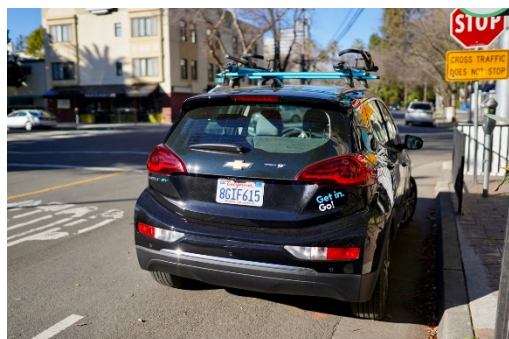


Image source: CARB

Electrify America will use marketing to boost station utilization. Messaging will communicate, for each charger, charger location, charging speed, acceptable payment methods, and nearby conveniences (amenities). It will also communicate affordability (subscription plans and automaker bundling).

¹⁰ 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.

LOW-INCOME OR DISADVANTAGED COMMUNITY BENEFITS

As described in Table 4, Electrify America has provided CARB staff with confidential expenditure information demonstrating that Cycle 1 ZEV Investment Plan spending in each of the prescribed 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 spending for the Cycle 1 and Cycle 2 ZEV Investment Plans, as well as future cycle ZEV investment plans, and strive to ensure that, to the maximum extent allowable under the 2.0-Liter Partial Consent Decree, at least 35 percent of the investment plan funds benefit low-income or disadvantaged communities disproportionately affected by air pollution.

VW 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 must pay \$2.7 billion into a national Environmental Mitigation Trust over a three-year period 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.¹¹ 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. Table 6 below lists the public meetings held to develop the Beneficiary Mitigation Plan.

¹¹ California's total Trust allocation is \$422,636,320.

Table 6: Public Meetings on Developing California’s Beneficiary Mitigation Plan

Date	Location	Meeting
October 9, 2017	Sacramento and Webcast	Workshop
October 26, 2017	Riverside and Webcast	Board Meeting
February 26, 2018	Sacramento and Webcast	Workshop
February 28, 2018	Fresno	Workshop
March 1, 2018	Oakland	Workshop
March 5, 2018	Redding	Workshop
March 7, 2018	Diamond Bar	Workshop
March 8, 2018	Fontana	Workshop
May 25, 2018	Sacramento and Webcast	Board Meeting

The funding described in the Beneficiary Mitigation Plan will complement 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, and the Community Air Protection Program (Assembly Bill 617). The next section describes the projects that will be funded from the Beneficiary Mitigation Plan.

PROPOSED AND ACTUAL TRUST EXPENDITURES

CARB must fully mitigate the excess NO_x caused by the subject VW diesel vehicles in California. Staff calculated the NO_x target as 10,000 tons. 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 meet this NO_x emission reduction target.

Table 7 shows the project funding categories and allocations the Board approved in the Beneficiary Mitigation Plan.

Table 7: 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 section describes the project funding categories and expenditures. A brief description of each project funding category is listed below. 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 will be used to replace eligible Class 4-8 conventionally fueled transit, shuttle, and school buses with commercially available zero-emission buses, supporting early adoption of zero-emission technologies and reducing diesel's harmful impacts on children. The funding will be implemented in two equal installments of \$65 million each and will be 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) will administer this funding category statewide. The SJVAPCD is conducting public work group meetings in spring 2019 to seek input on the application process and requirements, with the intent of developing a streamlined funding process. The SJVAPCD expects to release the first statewide \$65 million funding opportunity in fall 2019.

Since this project is in the early implementation stage, no project funds have been expended as of December 31, 2018.

ZERO-EMISSION CLASS 8 FREIGHT AND PORT DRAYAGE TRUCKS: \$90 MILLION

Funding for this category will be 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 3 to 5 years.

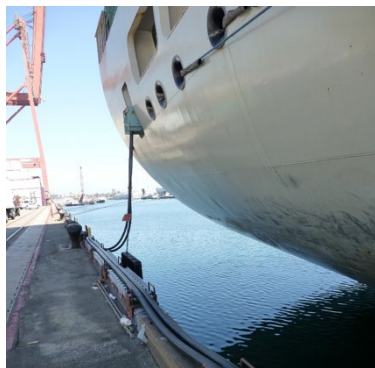


Funds will be available on a first-come, first-served basis. For each vehicle funded, the incentive amount includes funding to help offset zero-emission vehicle infrastructure costs. Staff expects at least 50 percent of the total project funds will benefit low-income or disadvantaged communities.

The South Coast Air Quality Management District (SCAQMD) will administer this funding category statewide. The SCAQMD is conducting public work group meetings in spring 2019 to seek input on the application process and requirements, with the intent of developing a streamlined funding process. The SCAQMD expects to release the first statewide \$27 million installment (30 percent of the allocation for this project funding category) in spring 2020.

Since this project is in the early implementation stage, no project funds have been expended as of December 31, 2018.

ZERO-EMISSION FREIGHT AND MARINE PROJECTS: \$70 MILLION



Funding for this category will be 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 will be administered in two equal increments of \$35 million, two years apart so that CARB can monitor progress and adjust the implementation of the project as needed. Vehicle or equipment owners will be eligible to apply for funding via competitive solicitation. At least 75 percent of this allocation will benefit low-income or disadvantaged communities.

The Bay Area Air Quality Management District (BAAQMD) will administer this funding category statewide. The BAAQMD is conducting public work group meetings in spring 2019 to seek input on the solicitation process and requirements. The BAAQMD expects to release the solicitation for the first statewide \$35 million installment in fall 2019.

Since this project is in the early implementation stage, no project funds have been expended as of December 31, 2018.

COMBUSTION FREIGHT AND MARINE PROJECTS: \$60 MILLION

Funding for this category will be 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 will be allocated in two installments of \$30 million each, two years apart so that CARB can monitor progress and adjust as needed. Vehicle or equipment owners will be eligible to apply for funding via competitive solicitation. Staff expects that at least 50 percent of this allocation will benefit low-income or disadvantaged communities.

The SCAQMD will administer this funding category statewide. The SCAQMD is conducting public work group meetings in spring 2019 to seek input on the solicitation process and requirements. The SCAQMD expects to release the solicitation for the first statewide \$30 million installment in fall 2019.

Since this project is in the early implementation stage, no project funds have been expended as of December 31, 2018.

LIGHT-DUTY ZERO-EMISSION VEHICLE INFRASTRUCTURE: \$10 MILLION



Funding for this category will be 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 will provide 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 will be 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.

The BAAQMD will administer this funding category statewide. The BAAQMD is conducting public work group meetings in spring 2019 to seek input on the application process and requirements. BAAQMD and CARB staff are working with the California Energy Commission, the Governor's Office of Business and Economic Development, and other agencies to coordinate funding efforts. The BAAQMD expects to release a statewide solicitation for the project in fall 2019.

Since this project is in the early implementation stage, no project funds have been expended as of December 31, 2018.

RESERVE: \$63 MILLION

The Beneficiary Mitigation Plan allocates \$63 million 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. 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.

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 8. 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 8: 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 9 includes an accounting of the State's Trust funds for this first reporting period. As of December 31, 2018, no expenditures have occurred, as the projects are still in the early stages of implementation. For each project funding category, the table includes the beginning balance (proposed expenditures), the actual expenditures (none as of this reporting), and the remaining balance. 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. In addition, the Trustee is currently deducting money from each state's interest

earnings to pay federal taxes in the event the monies are determined to be federally taxable.¹² The “Cumulative Totals” shown at the bottom of the table reflect the original amount of California’s allocation, the total cumulative amount of interest earned through December 31, 2018, the total cumulative amount expended through December 31, 2018, and the total funds remaining. The table also includes the remaining balance at the beginning of the current reporting period, as reported by the Trustee on December 31, 2018, reflecting all earnings and deductions; the amount of interest earned (market value) in the current reporting period; the amount expended in the current reporting period; and the ending balance. Note that because this is the first report, the amounts for the current reporting period and the cumulative totals are the same. All amounts in Table 9 are rounded to the nearest dollar.

¹² The Trustee applied for a Private Letter Ruling from the Internal Revenue Service (IRS) in June 2018. The IRS’ decision is pending as of December 31, 2018.

Table 9: California's VW Mitigation Trust Expenditures

Project Funding Category	Amounts/Expenditures	Description	Status
Zero-Emission Transit, School, & Shuttle Buses	Begin*: \$130,000,000 Expended: \$0 Remaining: \$130,000,000	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 expected to be released in fall 2019.
Zero-Emission Class 8 Freight and Port Drayage Trucks	Begin*: \$90,000,000 Expended: \$0 Remaining: \$90,000,000	Replace existing diesel Class 8 freight and port drayage trucks with zero-emission technologies; first-come/first-served.	First \$27 million statewide installment expected to be released in spring 2020.
Zero-Emission Freight and Marine Projects	Begin*: \$70,000,000 Expended: \$0 Remaining: \$70,000,000	Fund most cost-effective, zero-emission projects in freight and marine sectors; competitive solicitation.	Solicitation for first \$35 million statewide installment expected to be released in fall 2019.
Combustion Freight and Marine Projects	Begin*: \$60,000,000 Expended: \$0 Remaining: \$60,000,000	Fund most cost-effective, clean combustion projects in freight and marine sectors; competitive solicitation.	Solicitation for first \$30 million statewide installment expected to be released in fall 2019.
Light-Duty Zero-Emission Vehicle Infrastructure	Begin*: \$10,000,000 Expended: \$0 Remaining: \$10,000,000	Purchase, install, operate, and maintain new charging and fueling stations for light-duty zero-emission vehicles.	Statewide solicitation expected to be released in fall 2019.
Reserve (including administrative costs)	Begin*: \$63,000,000 Expended: \$0 Remaining: \$63,000,000	Fund administrative costs for above projects; fund additional projects needed to meet NOx emission reduction target	CARB and the statewide administrators are currently engaged in project planning, development, and initial implementation. As of December 31, 2018, no administrative funds had been disbursed.
Cumulative Totals:	Begin: \$422,636,320 Earned: \$2,731,221 Expended: \$0 Remaining: \$425,367,541	Current Reporting Period (through December 31, 2018):	Begin: \$422,636,320 Earned: \$2,731,221 Expended: \$0 Remaining: \$425,367,541

* 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.

LOW-INCOME OR DISADVANTAGED COMMUNITY BENEFITS

As shown in Table 7, 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 will 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.

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. Project implementation is in its preliminary stages, and vehicle and equipment expenditures have not yet begun as of the date of this first report. However, during Beneficiary Mitigation Plan implementation, CARB staff will monitor fund expenditures and track low-income and disadvantaged community benefits. Future annual reports will include an ongoing assessment of these expenditures and benefits.