

State of California  
AIR RESOURCES BOARD

**STAFF ANALYSIS OF ELECTRIFY AMERICA'S  
CYCLE 4 ZERO-EMISSION VEHICLE INVESTMENT PLAN**

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## **Table of Acronyms**

BEV .....	Battery Electric Vehicle
CARB .....	California Air Resources Board or the Board
CCS.....	Combined charging system
DAC-LIC .....	Disadvantaged or Low-Income Communities
DCFC .....	Direct Current Fast Charger
EV .....	Electric Vehicle
kW.....	Kilowatt
MW .....	Megawatt
PEV.....	Plug-in Electric Vehicle (includes BEVs and PHEVs)
PHEV.....	Plug-in Hybrid Electric Vehicle
U.S. EPA .....	United States Environmental Protection Agency
VW .....	Volkswagen
ZEV .....	Zero Emission Vehicle
ZEAP .....	ZEV Equitable Access Program

## Executive Summary

On October 20, 2023, Volkswagen (VW) subsidiary Electrify America submitted its proposed Cycle 4 California Zero Emission Vehicle (ZEV) Investment Plan (Cycle 4 Plan) to the California Air Resources Board (CARB or Board). This report provides CARB staff's assessment concerning how the proposed Cycle 4 Plan aligns with the requirements of Appendix C of the 2.0-liter Consent Decree (the ZEV Investment Commitment), as well as with the commitments Electrify America made voluntarily in response to California Senate Bill (SB) 92 (Committee on Budget and Fiscal Review, Chapter 26, Statutes of 2017), codified at Health and Safety Code section 39614, Board Resolution 17-23 (approved at the July 27, 2017, Board hearing of the Cycle 1 Plan), Board Resolution 18-54 (approved at the December 13, 2018, Board hearing of the Cycle 2 Plan), and Board Resolution 21-14 (approved at the June 24, 2021, Board hearing of the Cycle 3 Plan).

In 2016 and 2017, CARB, the California Attorney General's Office, the United States Department of Justice, and U.S. EPA entered into a series of settlements with VW to resolve federal and California claims for VW's use of illegal defeat devices on its diesel vehicles. Among other remedies in the settlements, VW is required to invest \$800 million in California over 10 years in four consecutive, 30-month cycles, subject to approval by CARB. This requirement is referred to as the ZEV Investment Commitment or Appendix C. VW must develop an investment plan for each of the four cycles, subject to approval by CARB. To fulfill the ZEV Investment Commitment, VW may invest in any of four allowable areas: ZEV infrastructure, including the development, construction, maintenance, and marketing of ZEV charging stations; brand-neutral public awareness and education; increasing ZEV access; and the establishment of two "green cities," with an emphasis on transportation electrification projects like car sharing and zero-emission freight. Electrify America, a wholly-owned subsidiary of VW, implements the ZEV Commitment on VW's behalf.

Electrify America's proposed Cycle 4 Plan, covering the period of July 1, 2024 through December 31, 2026, identifies investments in charging infrastructure, and public education, awareness, outreach, and marketing activities. In aggregate, these investments are designed both to demonstrate the utility of ZEVs and to increase their use in the State. The financial breakdown is as follows:

- Approximately \$172 million on fueling infrastructure (including operations and maintenance)
  - \$92 million for new site installations,
  - \$80 million for existing site upgrades, maintenance, and site electricity demand charges;
- Approximately \$5 million for ZEV awareness and education;
  - As part of this investment, the ZEV Equitable Access Program (ZEAP) will provide support to community-based organizations in California and will focus on disadvantaged and low-income communities;

- Approximately \$3 million for Electrify America’s efforts to drive station utilization; and
- Approximately \$20 million for allowable operational expenses.

In the proposed Cycle 4 Plan, Electrify America continues its commitment, as provided in SB 92 and Board resolutions 17-23, 18-54, and 21-14 described below, to strive to achieve a goal of at least 35% investment in low-income or disadvantaged communities in the State.

On October 24, CARB staff posted the proposed Cycle 4 Plan for public review and comment. CARB staff reviewed the proposed Cycle 4 Plan and public comments and has determined that the proposed Cycle 4 Plan conforms with the requirements of the 2.0-liter Consent Decree, and is consistent with the commitments Electrify America made in response to SB 92 and Board Resolution 17-23. Based on this review and determination, CARB staff recommends that the Board approve the proposed Cycle 4 Plan.

## **ZEV Investment Commitment Requirements**

In 2016 and 2017, CARB, the California Attorney General’s Office, the United States Department of Justice, and U.S. EPA entered into a series of settlements with VW to resolve federal and California claims for VW’s use of illegal defeat devices on its diesel vehicles. Among other remedies in the settlements, VW is required to invest \$800 million in California over 10 years in four consecutive, 30-month cycles, subject to approval by CARB. This requirement is referred to as the ZEV Investment Commitment or Appendix C. To fulfill the ZEV Investment Commitment, VW may invest in any of four allowable areas: ZEV infrastructure, including the development, construction, maintenance, and marketing of ZEV charging stations; brand-neutral public awareness and education; increasing ZEV access; and the establishment of two “green cities,” with an emphasis on transportation electrification projects like car sharing and zero-emission freight vehicles.

ZEV investments must comply with the terms and goals of the settlements. Among other things, ZEV investments must promote and advance the use and availability of ZEVs through each category of investment. Infrastructure investments must support and advance the use of ZEVs in California by addressing an existing need or supporting a reasonably anticipated need. Public awareness and education investments must build or increase public awareness of ZEVs, and cannot feature, favor, or advertise VW’s vehicles or services. ZEV access investments are investments that increase public exposure and/or access to ZEVs without requiring consumer purchase or lease of a ZEV at full market value.

The settlement agreements also establish rules for the spending, governing what investment expenditures count as creditable. Each year, a third-party auditor (Crowe LLP) submits annual reports and a certification to CARB evaluating Electrify America’s spending for compliance with both the ZEV Investment Commitment and the approved plan cycle under which the spending took place.

## **SB 92 and Board Resolution 17-23 Guidance**

In addition to the Consent Decree, Senate Bill 92 and Board Resolution 17-23 provides guidance to Electrify America and to CARB. This guidance requires that CARB strive to ensure that 35% of the investment plan benefits low-income or disadvantaged communities and ensure that Electrify America submits progress reports on the implementation of the approved ZEV investment plans. SB 92 also states that CARB post each proposed investment plan for public comment, approve each plan at a public hearing, and report annually to the Legislature on the progress of implementing the approved plans. Board resolutions provide additional guidance for the contents that Electrify America could include in their ZEV investment plans.

Table 1 below summarizes staff's assessment concerning how well the proposed Cycle 4 Plan aligns with the requirements and goals of the ZEV Investment Commitment, and its consistency with SB 92 and Board Resolution 17-23.

### **The Cycle 4 Development Process**

#### **I. Electrify America's Outreach Efforts**

Electrify America launched a National Outreach Process to receive feedback from relevant parties and the public in the spring and summer of 2023. Electrify America indicated that they hosted webinars, sent emails to relevant parties, and invited general input through a public-facing submissions page. Through the National Outreach Process, Electrify America received 182 comments, proposals, and recommendations to help inform the Cycle 4 Plan. Of these 182 submissions, 161 were considered ineligible because the submissions centered around site host inquiries or site locations, and Electrify America has a separate portal for these types of submissions. Electrify America states that they followed up with each respondent on their submission.

Common themes that emerged in the comment submissions and conversations were the importance of charging station reliability, geographic convenience, charger density, and fast charging. These issues were also reported as barriers during polling that Electrify America conducted during webinars.

#### **II. CARB's Public Process**

Before approving the Cycle 1 Plan in 2017, CARB undertook an extensive public process to develop a Guidance Document to inform the development, implementation, and oversight of Electrify America's ZEV investment plans. This guidance document summarizes CARB's overall guiding principles for ZEV investments and provides specific recommendations, expectations, and example projects.

Since that time, Electrify America has met monthly with CARB staff to discuss the implementation status of the cycles 1, 2, and 3 plans. Electrify America has also provided

public written quarterly update reports and has submitted six annual reports presenting its implementation progress from 2017 through 2022.

As required by Board Resolution 17-23, CARB also held a public meeting on August 16, 2023 to gather stakeholder input on Electrify America's progress in implementing the requirements of Appendix C of the Partial Consent Decree to date. During this meeting, CARB staff and Electrify America staff presented on processes, guiding requirements and goals for the investments, and the progress of implementing the investments in California. At this meeting, the public was given the opportunity to provide comments on each investment category. The comments received were in support of the prior investments while some commenters voiced the need for reliability-related investments to ensure existing public chargers are available for use for customers. CARB received one letter in September following the public meeting emphasizing the need to focus on station replacements to improve network reliability to reinforce comments made at the public meeting.

On October 20, 2023, Electrify America submitted its proposed Cycle 4 Plan to CARB. On October 24, 2023, CARB staff posted the proposed Cycle 4 Plan for public review and comment. The posting initiated a 14-day public comment period, which ended on November 7, 2023. During this comment period, CARB received 12 comments with 11 of those comments supporting the proposed Cycle 4 Plan and urging its approval. One additional letter was received after the public comment period ended calling for several actions to address station reliability. A summary of the public comments CARB received is provided in the Appendix.

This report summarizes the proposed Cycle 4 Plan and staff's assessment, and the CARB Board will consider the Plan at the January 25, 2023, Board Meeting. Prior to the Board deciding whether to approve or disapprove, in whole or in part, the Cycle 4 Plan, staff will present an overview of the Plan and their assessment, Electrify America will make a presentation and respond to any questions the Board may have, and members of the public will have an opportunity to provide comments. A Public Agenda for the Board hearing, including the exact date, time, and location, will be released at least 10 days before the hearing, including via email, to the vw-zevinvest listserv, for which interested parties may sign up at [https://public.govdelivery.com/accounts/CARB/subscriber/new?topic\\_id=vw-zevinvest](https://public.govdelivery.com/accounts/CARB/subscriber/new?topic_id=vw-zevinvest).

## **The Cycle 4 ZEV Investment Plan**

This section of the staff report summarizes the proposed \$200 million Cycle 4 Plan submitted to CARB on October 20, 2023.

Electrify America's Cycle 4 Plan proposes to invest in charging infrastructure, and ZEV awareness and education. Funding for ZEV access is incorporated in the public education and awareness activities. In aggregate, the investments, described in more detail below, are designed both to demonstrate the utility of ZEVs and to increase their adoption in the State. Electrify America anticipates that, as a result of the proposed Cycle 4 Plan, approximately



360-740 new chargers will be operational by the end of the cycle and 600 will be upgraded. As a whole, the proposed Cycle 4 Plan highlights Electrify America's commitment to the 35% disadvantaged or low-income community spending goal (for both infrastructure and public education and awareness) consistent with SB 92 and Board resolutions 17-23, 18-54, and 21-14.

**~ \$172 million - Fueling infrastructure (including operations/maintenance)**

*Network Growth - \$92 million*

Electrify America proposes spending in direct current fast chargers (DCFC) to expand coverage in existing and new metropolitan areas to expand the existing charging network. After completing an internal assessment and utilizing different models to analyze the electric vehicle (EV) market, Electrify America identified 15 metropolitan areas for Cycle 4 charging investments: 9 existing areas where investment occurred in cycles 1, 2, and 3 and 6 new areas (El Centro, Merced, Modesto, Redding, Vallejo-Fairfield, and Yuba City).

By using the site selection criteria outlined in the Cycle 4 Plan, Electrify America can continue to grow their network to ensure that these site locations will drive ZEV adoption in California.

*Station Upgrades - \$80 million*

Electrify America's proposed Cycle 4 Plan intends to upgrade sites that the company has determined meet the metrics of replacements established by Electrify America. The metrics Electrify America will factor in when considering a station for upgrades include the age of the charger, utilization, uptime performance, number, and type of work orders for the station, customer feedback of the station, location on key travel routes, parts availability for the station, and serviceability. The chargers at these sites will be replaced with Electrify America's current Generation 4 ultra-fast chargers that are capable of delivering 350 kilowatts (kW).

Electrify America has identified 600 chargers at approximately 130 locations that were installed as part of Cycles 1 and 2, which will be closely monitored for station upgrades. These stations are spread out in regional routes, highways, and metropolitan areas in California in which Electrify America invested as part of cycles 1 and 2. Cycle 3 stations are not eligible for upgrades and Cycle 4 investments will already include the equipment that will be used for station upgrades.

Within the station upgrades, Electrify America also proposes to remove the CHAdeMO charger, which can only deliver up to 50 kW and replace it with a combined charging system (CCS) charger if there is another CHAdeMO charger, operated by Electrify America or any other charging provider, within 5 miles of the Electrify America site. Electrify America cites low utilization in CHAdeMO chargers, decline in CHAdeMO-equipped vehicles in the market, and maintenance costs as justification for the removal of CHAdeMO chargers.

**~ \$5 million - Brand-Neutral Public Awareness and Education**

In Cycle 4, Electrify America proposes to invest in a number of programs to ensure that the benefits of ZEV transportation and charging is socially responsible and accessible to all. As part of the Cycle 4 investment, Electrify America has committed to support Electrify America’s California Workforce Development Science, Technology, Engineering, and Mathematics (STEM) Program, its newly established California ZEV Equitable Access Program (ZEAP), and the California Membership & Sponsorship Program, as well as Veloz’s ‘Electric for All’ Campaign. The Cycle 4 plan does not have any planned expenditure for brand-neutral media in this category.

From the brand-neutral education and awareness budget, Electrify America’s Cycle 4 Plan proposes to establish its ZEV Equitable Access Program (ZEAP). This program will provide community-based organizations with funds to further education and awareness within California’s low-income or disadvantaged communities. Electrify America proposes to engage with the CARB ZEV Equity Task Force to develop program requirements that would be included in a request for proposals (RFP) to select partners to implement the program. The ZEV Equity Task Force is a task force established by CARB to help implement Board Resolution 22-12 supporting ACCII implementation by bringing stakeholders together to identify programs and projects to ensure equitable access to zero-emission transportation. Electrify America also commits up to \$500,000 of this funding for programs proposed by the ZEV Equity Task Force and will incorporate those projects into the RFP.

**~ \$3 million - Branded Marketing**

Electrify America proposes to use branded marketing to boost station utilization and educate consumers about the network. This messaging will shift from new customers to existing EV drivers in Cycle 4 by utilizing various methods of marketing including television ads, social media posts, and websites. The intent of this branded marketing campaign will be to educate current EV drivers on the innovation and technology at EA sites as well as location, accessibility, and customer experience.

**Staff Assessment of the Proposed Cycle 4 Plan**

This section assesses how well the proposed Cycle 4 Plan aligns with the requirements and goals of the ZEV Investment Commitment, and its consistency with SB 92 and Board Resolution 17-23. Table 1 lists these specific requirements followed by staff comments concerning how Electrify America addressed them. Staff finds that the proposed Cycle 4 Plan meets the requirements and goals, with one exception related to a requested action from Resolution 17-23.

**Table 1**

**Proposed Cycle 4 Plan Alignment with the Requirements of the ZEV Investment Commitment, SB 92, and Board Resolution 17-23**

<b>Requirement</b>	<b>Comments</b>
<p>Plan must include description of all investments, including measures to increase access in underserved areas (such as disadvantaged or low-income communities).</p> <p>App C, ¶ 3.3.2.1</p>	<p>Sections 5 and 6 of the Plan meet this requirement.</p> <ul style="list-style-type: none"> <li>• Will strive to ensure that at least 35% of the investments are in disadvantaged or low-income communities.</li> <li>• The ZEV Equitable Access Program, which is part of the education and awareness investment, will provide support to community-based organizations to create education materials, host EV ride and drive events, and EV purchasing workshops in California and will focus on disadvantaged or low-income communities.</li> </ul>
<p>Plan must include description of how each investment makes progress toward and/or meets one or more of the goals of the Partial Consent Decree.</p> <p>App C, ¶ 3.3.2.2</p>	<p>Sections 5 and 6 of the Plan meet this requirement.</p> <ul style="list-style-type: none"> <li>• Investment Plan describes how each investment meets a category goal.</li> </ul>
<p>Plan must include an estimated schedule for implementing each investment, in 6-month intervals.</p> <p>App C, ¶ 3.3.2.3</p>	<p>Plan meets requirement.</p> <ul style="list-style-type: none"> <li>• Infrastructure investments are detailed by quarter of the year (Section 5.4.3).</li> <li>• The education and awareness program timeline is provided in 6-month intervals for the RFP process (Section 6.3.1).</li> </ul>
<p>Plan must include a projection of anticipated creditable costs associated with each investment, on an itemized basis, with costs broken down into at least 12 categories.</p> <p>App C, ¶ 3.3.2.4</p>	<p>Appendix of the Plan meets this requirement.</p> <ul style="list-style-type: none"> <li>• Electrify America provided an overview of creditable costs for Cycle 4 investments in a confidential, trade secret submission reviewed by CARB staff.</li> </ul>
<p>Plan must include, for infrastructure, estimated geographic regions (which must include a variety of cities, metropolitan areas, and types of</p>	<p>Section 5 of the Plan meets this requirement.</p> <ul style="list-style-type: none"> <li>• Electrify America provided an estimate of the geographic regions, types of charging, number of sites, number of chargers, charger model that will be used, cost estimate for the</li> </ul>

<b>Requirement</b>	<b>Comments</b>
<p>locations) and types of charging (e.g., Level 2 or DC ), quantities of sites and chargers per site, costs per site, type and number of connectors per site, date of completion, operating model and utilization statistics to be collected, and explanation of how infrastructure meets reasonable need and advances use of ZEVs in State.</p> <p>App C, ¶ 3.3.2.5</p>	<p>infrastructure investment, and timeline of deployment in their Cycle 4 Plan, along with 6 new regions.</p> <ul style="list-style-type: none"> <li>• This cycle also includes upgrades for stations installed in Cycles 1 and 2.</li> <li>• Adequately explained how infrastructure meets reasonable need and advances use of ZEVs in State.</li> </ul>
<p>Plan must include a plan to provide for infrastructure maintenance for 10 years from effective date of settlement, including toll-free number with live operator under VW or Electrify America’s control.</p> <p>App C, ¶ 3.3.2.5</p>	<p>Section 5.8 of the Plan meets this requirement.</p> <ul style="list-style-type: none"> <li>• DCFC stations will have 24/7 toll-free number.</li> <li>• Electrify America has contractual maintenance agreements to keep sites available. As part of this maintenance plan, Electrify America included pre-deployment maintenance, staff training, recurring preventive maintenance checks, the deployment of the Internal Field Service Engineer (FSE) Program, supply chain maintenance, the contact center, the network operations center, work orders, continued quality assurance, and future improvement measures as key pieces to ensure the infrastructure is operable.</li> <li>• All infrastructure will be maintained for 10 years from settlement effective date using infrastructure category funds.</li> </ul>
<p>All electric vehicle infrastructure should be able to service all non-proprietary connectors, may have to use multiple connectors or charging protocols and approaches that anticipate evolving standards and technologies.</p>	<p>Section 5.9 of the Plan meets this requirement.</p> <ul style="list-style-type: none"> <li>• Electrify America stations will have CCS connectors, allowing for a variety of different vehicles to charge. Electrify America will also evaluate the need of NACS chargers as the connector begins supporting vehicles.</li> </ul>

<b>Requirement</b>	<b>Comments</b>
App C, ¶ 3.3.2.5	
<p>The Plan must describe the brand-neutral media activities Electrify America will initiate, such as the identities of third-party partners, the platforms in which information will be provided (i.e., television, phones, web), geographic placement of physical advertisements, and the number and length of advertisements. ZEV Awareness programs must be vehicle and service brand neutral, and must not feature or favor VW, Audi, or Porsche’s vehicles or services. The Plan also must describe how proposed national and California awareness and education activities are related and/or differ.</p> <p>App C, ¶¶ 3.3.2.6, 2.5.6, 1.10.2</p>	<p>Not applicable. While the Cycle 4 plan does identify brand-neutral initiatives, they are not focused on media.</p>
<p>A certification that none of the investments were already planned by VW, Audi, or Porsche, or are or will be required by any law in Cycle 4.</p> <p>App C, ¶ 3.3.2.7</p>	<p>Section 9 of the Plan meets this requirement.</p> <ul style="list-style-type: none"> <li>• Electrify America provided a Certification of Activities in the Plan.</li> </ul>
<p>An explanation that all the ZEV investments are not concentrated in one area of the State.</p> <p>App C, ¶ 3.3.2.8</p>	<p>Section 5.4.3 of the Plan meets this requirement.</p> <ul style="list-style-type: none"> <li>• Investments span most of the State, with investment in fifteen areas across the State.</li> </ul>
<p>ZEV investments do not include research funding.</p>	<p>Plan is consistent and has no proposed research and development projects.</p>

<b>Requirement</b>	<b>Comments</b>
App C, ¶ 3.3.2.9	
<p>Description of how VW will monitor and maintain each ZEV investment.</p> <p>App C, ¶ 3.3.2.10</p>	<p>Sections 5 and 6 of the Plan meet this requirement.</p> <ul style="list-style-type: none"> <li>• Electrify America will monitor Cycle 1 and 2 investments to ensure sites are being properly selected for upgrades and will continue to monitor Cycle 3 and 4 investments for maintenance.</li> <li>• The education and awareness program will continuously evolve as Electrify America develops RFPs and incorporates feedback.</li> </ul>
<p>Any other information CARB reasonably requests during meet and confer meetings.</p> <p>App C, ¶ 3.3.2.11</p>	<p>Electrify America made changes in response to confidential feedback provided by CARB between July and October 2023, as the Cycle 4 Plan was being developed.</p>
<p>Invest in a second “green city” with a population of about 500,000 that predominantly consists of disadvantaged communities as identified by CalEnviroScreen. “Green city” initiatives may include ZEV car sharing, ZEV transit, and ZEV freight transport projects.</p> <p>Second Partial Consent Decree, ¶ 10</p>	<p>Not applicable in Cycle 4 since the investment was made in Cycle 3.</p>
<p>Include additional detail on business plans, project descriptions, project partners, project timelines, and proposed project expenditures in the Cycle 4 Plan.</p> <p>Resolution 17-23</p>	<p>Sections 5 and 6 of the Plan meet this requirement.</p> <ul style="list-style-type: none"> <li>• Detail in the Plan addresses these metrics.</li> </ul>

<b>Requirement</b>	<b>Comments</b>
<p>Strive to ensure 35% of ZEV spending benefits disadvantaged or low-income communities as defined by CalEnviroScreen, and draw from experience from the Cycles 1, 2, and 3 Investment Plans to further increase the benefits to disadvantaged or low-income communities.</p> <p>Resolution 17-23</p>	<p>Sections 5 and 6 of the Plan are consistent with this provision.</p> <ul style="list-style-type: none"> <li>• Electrify America will continue to ensure that 35% of ZEV infrastructure investments will be located in disadvantaged communities or low-income communities.</li> <li>• The ZEV Equitable Access Program (ZEAP), which is part of the education and awareness investment, will provide support to community-based organizations in California and will focus on disadvantaged or low-income communities.</li> </ul>
<p>Include an evaluation of heavy-duty hydrogen opportunities in Plan submittals.</p> <p>Resolution 17-23</p>	<p>Section 5.10 of the Plan is consistent.</p> <ul style="list-style-type: none"> <li>• Electrify America has not identified hydrogen investment opportunities for Cycle 4. Electrify America remains open to new opportunities in hydrogen that may arise going forward.</li> </ul>
<p>Include job creation, and job training estimations (especially in terms of minority-, woman-, and veteran-owned businesses) as part of the criteria for awarding contracts, and explain the process for doing so in plan submittals. The Board encourages Electrify America to provide hiring opportunities for qualified residents of disadvantaged communities.</p> <p>Resolution 17-23</p>	<p>Electrify America provided CARB with an Addendum to the Cycle 4 Plan which provides details to meet this provision of Resolution 17-23. This information is important to convey the level of effort taken to develop the job force in California.</p>
<p>Plan and implement projects in manner that ensures fair competition in ZEV market, to ensure market's long-term robustness.</p>	<p>Section 5 of the Plan is consistent.</p> <ul style="list-style-type: none"> <li>• Charging needs assessment examines demand for services and supply already provided. From this assessment, Electrify America identifies areas with unmet demand for continued investment.</li> </ul>

Requirement	Comments
Resolution 17-23	
<p>Implement its projects over the ten-year settlement period in a transparent manner that allows for public input.</p> <p>Resolution 17-23</p>	<p>Section 4 of the Plan is consistent.</p> <ul style="list-style-type: none"> <li>• Electrify America maintained an open web portal for submissions of comments, proposals, and recommendations while developing the investment plan.</li> <li>• Electrify America has an open web portal for interested parties to inquire about becoming a site host.</li> </ul>
<p>Execute programs in a manner that ensures the investments are self-sustaining by the end of the ten-year settlement period, ensuring existence beyond the ten-year settlement period.</p> <p>Resolution 17-23</p>	<p>Section 5.7 of the Plan is consistent.</p> <p>Electrify America is contracting with many existing charging infrastructure businesses, and prioritizing decisions to ensure investments are sustained beyond the 10-year ZEV Investment Commitment period.</p>

## Recommendation

The Cycle 4 Plan outlines Electrify America’s proposed investments for the fourth 30-month investment cycle under the ZEV Investment Commitment, for Board approval. The Cycle 4 Plan includes investments in charging infrastructure, public education, awareness, outreach, and marketing activities, and allowable operational expenses. In aggregate, these investments are designed both to demonstrate the utility of ZEVs and to increase their adoption in the State. The Cycle 4 Plan also includes the continuation of investments in disadvantaged or low-income communities.

CARB staff considered stakeholder comments on the proposed Cycle 4 Plan as part of its analysis and in reaching its recommendation. The public stakeholder comments are 91% in support of the proposed Cycle 4 Plan (see Appendix for details).

One key policy question that the proposed investments in the Cycle 4 Plan raises concerns the appropriate balance between investing in new stations that expand the network versus upgrading existing stations with the latest technology. Electrify America is proposing \$92 million for new stations, including maintenance and operations, and \$80 million to upgrade existing stations. On the one hand, the need for new ZEV infrastructure is critical for the widespread adoption of ZEVs in California. Executive Order B-48-18 sets a goal for 250,000 chargers, including 10,000 DCFC in California by 2025. With almost 94,000 public and



shared EV chargers in California, the State is far from its goal.<sup>1</sup> Additionally, CARB's Advanced Clean Cars II program setting a requirement for 100% new light-duty ZEV sales by 2035<sup>2</sup> makes the need for more chargers beyond 2025 all the more critical. On the other hand, drivers have been complaining about station downtime and poor reliability of stations more generally as Electrify America expressed in their Cycle 4 ZIP's National Outreach Process. Upgrading existing stations has the potential to improve customer experience with charging, which is also necessary to support the ZEV market. Has Electrify America struck the right balance?

Staff considered this question and reviewed separate comment letters arguing both for new and existing investments. Strong arguments could be made for increasing the budget for new stations and equally reasonable arguments could be made for increasing investment in upgrades. Ultimately, staff conclude that Electrify America has struck a reasonable balance between investment in new and existing stations. They have defined a set of criteria to determine which stations are best suited for upgrade, with the goal of maintaining a high-quality charging experience and meeting the demands of increased EV adoption.

Staff find that the proposed Cycle 4 Plan generally meets the requirements and goals of the ZEV Investment Commitment and is consistent with SB 92 and Board Resolution 17-23. CARB staff believe that, when fully and properly implemented, the investments outlined in the Cycle 4 Plan promise to grow California's ZEV refueling infrastructure, contribute to improved air quality and public health, and help transform California's ZEV market. These benefits extend across California, including in disadvantaged or low-income communities.

CARB staff therefore recommends that the Board approve the proposed Cycle 4 Plan.

## **Tracking Progress**

In response to Board Resolution 17-23, Electrify America has committed to provide CARB with public quarterly project status updates and an annual report, as they have done for cycles 1, 2, and 3 to date. The Board resolutions also require staff to provide bi-annual updates to the Board. This section serves as an update to the Board on Electrify America activities. Electrify America posted its second quarter (Q2) report of the 2023 calendar year on September 1, 2023. This section briefly summarizes the Q2 report, which provides an update on active investments to date as of June 30, 2023:

### ZEV Infrastructure Investments as of Q2 2023:

- Electrify America has 253 DCFC stations open in California.

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<sup>1</sup> Electric Vehicle Chargers in California. CEC. <https://www.energy.ca.gov/data-reports/energy-almanac/zero-emission-vehicle-and-infrastructure-statistics/electric-vehicle>. Data as of September 12, 2023. Accessed November 16, 2023.

<sup>2</sup> Advanced Clean Cars II. CARB. <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/advanced-clean-cars-ii>

- Approximately 55% of the 253 stations are in disadvantaged or low-income communities.
- Electrify America continued to incorporate onsite battery energy storage systems (BESS) and identified 125 stations best suited for battery storage placement in California by the end of Q2 2023. For those 125 stations, 109 are operational and the rest are in the planning or construction phases.
- Electrify America also provided \$2 million for solar-powered Level 2 charging stations for placement in rural areas, including in the Central, Coachella, and Imperial valleys. In Q2 2023, these stations continued to operate at 30 locations; 10 of these stations are managed by Electrify America in collaboration with the Fresno County Rural Transit Agency.

#### ZEV Awareness Investments as of Q2 2023:

- In Q4 2022, Electrify America began their Cycle 3 Brand Neutral campaign, “As Seen on EV” which aims to educate viewers on the feasibility of EV ownership while addressing misconceptions.
  - This media campaign went live in November 2022 and targeted audiences on social media and online and also drove the audience to a website, SeenOnEV.com, for more information.
  - The campaign will continue through July 2024. In Q2 2023, Electrify America estimates that the campaign delivered approximately 60 million impressions through streaming audio, outdoor ads, digital TV, and digital media in DAC and LIC communities.
- In 2022, Electrify America allocated almost \$3 million to support partnerships with community-based organizations that have greater access to, and credibility within, California’s low-income or disadvantaged communities. This investment promoted ZEV education and awareness in disadvantaged or low-income communities by supporting in-person and digital events, EV ride-and-drives, workshops to promote EV purchases, and other community engagement. The collaboration is with four community-based organizations: Breathe Southern California, Ecology Action, Plug-In America, and Valley Clean Air Now (Valley CAN).
- Electrify America used \$1.6 million to fund education and workforce development programs in science, technology, engineering and math, as they relate to ZEVs. In March 2023, Electrify America announced that five organization will receive funding, including Acterra: Action for a Healthy Planet, Ecology Action, EV Noire, Sinclair Community College, and Valley CAN.

#### Cycle 3 “Green City” Initiative (City of Long Beach and the Wilmington Neighborhood of Los Angeles):

- With the approval of the Cycle 3 ZEV Investment Plan in June 2021, Electrify America began foundational work for the second “green city” Initiative in the City of Long Beach and the Wilmington neighborhood of Los Angeles.
- In August 2021, Electrify America announced a collaboration with NFI Industries that will result in the installation of 38 DCFC to support heavy-duty electric trucks. The installation will include 150 kW and 350 kW chargers at the NFI facility in Ontario, California. With the installation of these chargers, NFI plans to deploy 60 electric drayage trucks that will operate from the ports of Los Angeles and Long Beach to NFI’s facility in Ontario.
  - In June 2023, Electrify America began construction of 38 fleet chargers and 4 megawatts (MW) of battery energy storage systems.
- In 2022, Electrify America and 4 Gen Logistics announced that 30 dedicated 150 kW and 350 kW DCFC with BESS installations will be installed at the Port of Long Beach.
  - In Q1 2023, Electrify America and 4 Gen Logistics obtained an onsite work permit from the City of Long Beach and submitted a Long Beach Harbor Development Permit Application in Q2 2023.
  - Additionally, 14 DCFC with BESS at 4 Gen’s Rialto, California location will also be installed. In May 2023, construction began on the 14 power balanced fleet chargers to support electric trucks in drayage operations within the City of Rialto. The installation of these chargers will support operations of 60 electric trucks that 4 Gen is operating. Adding chargers to the City of Rialto facility will support the second Green City investment by enabling the drayage trucks to get to and from the Port of Long Beach.
- In Q2 2023, Electrify America worked with other medium- and heavy-duty fleet owners and operators to identify opportunities for the second “green city” investment.

## Appendix - Cycle 4 ZEV Investment Plan Comment Summaries

This section summarizes the 12 eligible comments submitted during the public comment period that began on October 24, 2023, and ended at 5:00 PM on November 7, 2023. An additional comment that was submitted outside of the public comment period is included in the summary. The comments are grouped by issue area.

### I. General Support

Approximately 91% of comments received were supportive of the proposed Plan. These comments were from retailers, nonprofit organizations, telecommunication solutions providers, electrification software solutions providers, electrical equipment manufacturers, consulting firms, transportation providers, and community-based organizations advocating for electrification and environmental sustainability. Supporters identified the benefits of the proposed Plan, including benefits in and to disadvantaged communities; concomitant improvements in air quality and public health; contribution to advancing climate change goals; and how the previous plan aided in economic benefits; and job and skilled workforce creation.

#### Representative Comments

The proposed Cycle 4 Plan will:

- Continue to advance ZEV adoption in California by further building out public ultra-fast charging infrastructure in metropolitan areas and along highway corridors and continuing to invest in brand-neutral education and awareness efforts, including supporting and sponsoring ZEV education, STEM programming and workforce development training; (*Commenters: ABB, Ecology Action, Valley CAN, EVHybridNoire, MNX Global Logistics, Z Power and Distribution, SAI Group, Ignited, Ikea*).
- Provide critical financial support for CBOs like ours, our Central Coast partners and others throughout California, to reach the most vulnerable populations and include them in the electrification of transportation; (*Commenter: Ecology Action*).
- Continue to expand access to ZEVs in California, by further building out ultra-fast charging infrastructure in metropolitan areas and along highway corridors, supporting transit and medium- and heavy-duty fleet charging, and continuing to invest in brand-neutral education and awareness efforts. (*Commenter: Beyond Compliance*).

### II. Job Creation

Commenters expressed that the ZEV Investment Commitment was creating good paying jobs for Californians.

#### Representative Comments

- Electrify America’s investments are spurring jobs in California, including in low-income or disadvantaged communities. Commenters cited Electrify America’s 2022 year-end survey, which identified that 914 workers in California worked on Electrify America’s investments. Of these workers, vendors reported that 32% lived in low-income or disadvantaged communities, while vendors reported that approximately 1% of workers self-identified as veterans. Survey respondents also indicated that nearly 600 jobs were created or sustained because of work with Electrify America, roughly 50% of which were employees and contractors living and working in California. (*Commenters: ABB, Ecology Action, EVHybridNoire, MNX Global Logistics, Z Power and Distribution, SAI Group, Ignited, Ikea*).

### **III. Disadvantaged or Low-Income Communities**

Electrify America has committed to strive to ensure that at least 35% of its investment benefits disadvantaged communities or low-income communities disproportionately affected by air pollution. Commenters addressing this topic were supportive of Electrify America’s commitment to the continued investment in disadvantaged or low-income communities in the proposed Cycle 4 Plan.

#### Representative Comments

- The plan continues Electrify America’s commitment to providing benefit to rural, disadvantaged, or low-income communities, ensuring that all communities can access charging and participate in the transition to electric vehicles. Currently, Electrify America is reporting that over 50% of its public ultra-fast charging stations at various stages of development are in disadvantaged or low-income communities, exceeding the company’s 35% target. (*Commenters: ABB, Ecology Action, Valley CAN, MNX Global Logistics, Z Power and Distribution, SAI Group, Ignited, Ikea*).

### **IV. Request for Funding**

A few commenters expressed the need for funds to be directed to infrastructure investment in the Humboldt County.

#### Representative comments and staff responses:

- Would like to see more investment opportunities for “highway sites to enable long-distance travel” to make EV trips possible to and from Humboldt County. Business owners, employees, and suppliers regularly take long-distance trips from Humboldt, driving either Highway 101 (north-south) or Highway 299 and Interstate 5 (east-west). (*Commenter: Humboldt County Association of Governments*).
  - Electrify America has a process they manage for considering investment requests for specific infrastructure locations. (*CARB staff*)

## V. Request for More Station Retrofits

This comment letter was submitted after the comment period ended, but is included here for completeness.

### Representative comments and staff responses:

- CARB must establish enforceable requirements for station uptime and reliability. (*Commenter: Cool The Earth*).
  - CARB does not have the authority to require specific metrics related to station uptime and reliability. However, Electrify America must uphold their commitments in their maintenance plan for all stations during the Consent Decree. The Cycle 4 maintenance plan is defined in Section 5.8 and states Electrify America has contractual maintenance agreements to keep sites available. As part of this maintenance plan, Electrify America included pre-deployment maintenance, staff training, recurring preventive maintenance checks, the deployment of the Internal Field Service Engineer (FSE) Program, supply chain maintenance, the contact center, the network operations center, work orders, continued quality assurance, and future improvement measures as key pieces to ensure the infrastructure is operable. Infrastructure will also be maintained for 10 years from the settlement Effective Date using infrastructure category funds. (*CARB staff*).
- CARB must define the factors for station repair and/or replacement and must be the authority on which stations should be upgraded. (*Commenter: Cool The Earth*).
  - CARB does not have the authority to be involved in the decision about which stations are repaired or replaced. However, Electrify America has described their methods and metrics for determining which stations are to be upgraded. A summary of this is included in the section above titled “The Cycle 4 ZEV Investment Plan”. Specifics can be found in the Cycle 4 Plan in Section 5.3. Additionally, as described earlier, Electrify America has also dedicated a substantial portion of the Cycle 4 Plan infrastructure budget to station retrofits. This is in recognition that some older stations can no longer effectively be repaired and need to be fully replaced. (*CARB staff*).
- Repaired and replaced stations must be subject to the Consent Decree requirements regardless of whether the funds are from other sources. (*Commenter: Cool The Earth*).
  - CARB does not have the authority over Electrify America investments outside of the Consent Decree. (*CARB staff*).
- The repaired and/or replaced stations must be maintained for a period of 15 years from the Effective Date of October 2016. (*Commenter: Cool The Earth*).
  - The Consent Decree stipulates 10 years from its effective date for the required maintenance period of all stations. (*CARB staff*).