SR 26-253 Attachment 1

Zero Emission Program

ANNUAL PROGRESS REPORT

Publication Date: June 24, 2026

Leading the way to a

ZERO EMISSION FUTURE.

Table of Contents

AC Transit Overview

The Alameda-Contra Costa Transit District (AC Transit) stands as California's leading public bus-only transit agency. Based in Oakland, within the East Bay region of the San Francisco Bay Area, AC Transit was founded in 1960. The agency took over the historic transit routes of the Key System and its predecessors, which over the years have provided essential transportation through various means, including horse-drawn streetcars, electric streetcars, ferries, and buses.

AC Transit is dedicated to maintaining and improving the quality and accessibility of transit services for the 1.57 million residents living in the East Bay. Covering an area of 364 square miles, its service network spans 13 cities in Alameda and Contra Costa counties, as well as nearby unincorporated areas.

Zero Emission Program

Recognized as a leader in zero-emission bus (ZEB) initiatives, AC Transit has made significant strides on both national and international fronts. For more than twenty years, the organization has actively explored and assessed the feasibility of reduced and zero-emission technologies. The ZEB Program is closely aligned with the District's broader mission and environmental goals, which focus on lowering carbon emissions from both buses and facilities, ultimately enhancing the quality of life in neighboring communities.

To support the implementation of ZEBs, AC Transit has fine-tuned its project delivery methods and adopted sustainable maintenance practices. Every stage of development has provided our internal experts with opportunities to improve best practices related to procurement, project execution, operational efficiency, ZEB technology performance, and workforce development innovation.

Service Profile

AC Transit operates a total of 132 fixed routes, offering two main types of service: local service within the East Bay and Transbay express service. The East Bay local service includes regular routes, bus rapid transit routes, and supplemental school services, with operating hours varying by route. Most local services run daily from around 5:30 a.m. to midnight, while the All-Nighter lines are available from 1:00 a.m. to 5:00 a.m.

Consistent with AC Transit's Clean Corridors Plan, the deployment of ZEBs is prioritized in disadvantaged communities. These areas stretch from the northernmost part of the District down to nearly the southernmost region of Alameda County, encompassing all operating divisions, including Richmond, Emeryville, East Oakland, and Hayward.

AC Transit Service Area

Zero Emission Plan

On June 10, 2020, AC Transit's Board of Directors adopted a Resolution outlining the District's goal of full transition to zero emission technologies by 2040 as well as the first Zero-Emissions Bus Rollout Plan. Subsequently, on June 22, 2022, AC Transit's Board of Directors approved the new Zero Emission Bus Transition Plan to comply with the Bipartisan Infrastructure Law to meet FTA Requirements. This Zero Emission Bus Transition Plan establishes a fleet composed of 70% fuel-cell electric buses (FCEBs) and 30% battery electric buses (BEBs). The Plan outlines the guiding principles for strategic decision-making on issues and risks encountered during implementation, while prioritizing its mission to deliver safe, reliable, sustainable transit service that responds to the needs of our customers and communities.

The Innovative Clean Transit (ICT) regulation was adopted by the California Air Resources Board (CARB) in December 2018 and became effective on October 1, 2019. Title 13 California Code of Regulations §2023 (13 CCR § 2023.1 through 2023.11) requires all public transit agencies to gradually transition their bus fleets to zero-emission technologies. The ICT regulation applies to all transit agencies that own, operate, or lease buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. The ICT regulation requirements (Figure 1) each transit agency's new bus purchases to include 25% zero-emission buses (ZEBs) from 2023 through 2025, 50% ZEBs from 2026 through 2028, and, starting in 2029, 100% new bus purchases must be ZEBs.

Figure 1: Innovative Clean Transit ZEB Purchase Requirements

2023-2025	2026-2028	2029+
25% of bus purchases must be ZEBs	**50%** of bus purchases must be ZEBs	**100%** of bus purchases must be ZEBs
		Full ZEB purchases required by 2029

The Board of Directors adopted a ZEB resolution that addresses this ICT regulation by outlining eight items to be achieved with the ZEB Transition Plan to comply by 2040. These items are avoiding early retirement of conventional buses, identify ZEB technologies to be used, establishing a schedule for facilities modification to support transition, developing a schedule for ZEB bus purchases as well as conventional purchase to maintain TAM requirements, deploying ZEBs in disadvantaged communities, training plan and schedule for ZEB bus operators and maintenance staff, identifying potential funding sources, and identifying start-up and scale-up challenges. Within the startup and scale-up challenges, it is noted that the plan is a living document to guide the implementation and help the District work through potential challenges to explore solutions. To conclude, the transition plan establishes guiding principles that are derived from the above items in the adopted resolution. See Figure 2 below for description of the guiding principles.

Figure 2: Zero Emissions Bus Transition Plan Guiding Principles

No.	Description
1	Replace the fleet per Federal Transit Administration (FTA) mandated Transit Asset Management (TAM) Plan Performance Targets
2	Prioritize ZEB deployment per the AC Transit Board adopted Clean Corridors Plan
3	Procure ZEB's based on vehicle and infrastructure technology capabilities to meet service requirements
4	Deploy ZEB technology that is most efficient and sustainable to operate
5	Meet the 2040 ICT Goal

Program Risk

The District is monitoring risk associated with its guiding principles that impact its ability to meet new bus purchase percentage guidelines, as noted above, as well as meet the 2040 timeline for a full zero-emission bus fleet.

AC Transit is dedicated to delivering a transit service that is both accessible and dependable. To achieve this goal, it is essential that all services and supporting functions within the District receive sufficient funding. Several potential risks have been identified that could affect the successful execution of AC Transit's zero-emission bus (ZEB) program, potentially obstructing our ability to meet the directives established by the Board concerning our revenue fleet, infrastructure, and associated projects.

Figure 3 outlines these program risks in line with the District's guiding principles for the ZEB transition. These principles focus on targets for asset replacement, vehicle and infrastructure capabilities, operational efficiencies, sustainability, and safety management challenges. Additionally, we note the risks associated with federal policy. Each identified risk is paired with a specific action plan that is regularly monitored, allowing for timely adjustments in response to any changes that may impact the program.

Figure 3: Program Risk Matrix by Guiding Principle

Category	Description	Action
Guiding Principle #1: TAM Replacement Target	ZEB Transition funding needs of $2.0 Billion Fleet cost – $1.7 Billion Infrastructure – $282 Million	Monitor
Guiding Principle #3: Vehicle & Infrastructure Capabilities	BEB Charging Infrastructure Delays (Switchgear Supply)	Accept
	BEB Charging Infrastructure Reliability	Monitor
	BEB Service Range Limitation (60% of Block Assignments)	Accept
	Cost escalations from inflation and supply chain issues	Monitor
	Cost increase due to Project labor agreements and local workforce agreements	Monitor
	Utility Grid Capacity to Support BEB fleet charging needs	Mitigate
Guiding Principle #3: Efficient & Sustainable to Operate	Hydrogen Cost Increase ($9.0 per kg)	Monitor
	Hydrogen Station Maintenance Cost ($440K Annually)	Monitor
	Inability to charge BEBs due to utility power safety shutoffs	Monitor
	Resource constraints caused from fiscal cliff forecast	Monitor
	Utility kWh cost escalation (14% Increase)	Monitor
Guiding Principle #5: Federal Policies	Legislature impacting ability to secure funding	Monitor
	Tariffs impacts on materials cost increases	Monitor
Guiding Principle #5: Safety Management Hazards	Potential ZEB thermal events caused by high voltage battery design	Monitor

ZEB Program Update

Transition Progress

This annual report provides an update on the Districts progress toward its goal of complying with the ICT regulation to achieve a full transition to zero emission bus fleet by 2040. The District's has 58 ZEBs in service and 9 currently going through acceptance for a total of 67 ZEBS in the year 2026 (See Figure 4 below). The active fleet has been right sized to align with Realign 2.0 service implementations which began February 2026. Fueling capacity for hydrogen fuel has reached capacity for 195 buses and charging capacity up to 32 buses (see Figure 5 below). Capital Investments of approximately $417 million has been made dating back to the inception of the ZEB program in 2005 (See Appendix A).

Figure 4: Revenue ZEBs by Technology

Project Description	FCEB Qty	BEB Qty
Bus Procurement Project (10 ZEBs)	10	
Bus Procurement Project (5 ZEBs)		5
Bus Procurement Project (40 ZEBs)	20	20
Bus Procurement Project (3 ZEBs)		3
Bus Procurement Project (9 ZEBs) (acceptance)	9	
Total	**30**	**28**

Figure 5: Completed Infrastructure by Technology

Project Description	Hydrogen Fueling Capacity (Buses)	Electric Charging Capacity (Buses)
D4 Hydrogen Infrastructure	130*	
D2 Hydrogen Infrastructure	65	
D2 Battery Electric Infrastructure		26
D4 Battery Electric Infrastructure		6
Total	**195***	**32**

**Project in Acceptance Phase increases capacity to 130+ at D4 and 195 Total*

The Program Build Sheet Summary (Figure 6) shows an estimated $2.5 billion with a funding gap of $663 million, which is dependent upon potential grants the district may secure. Rising zero emissions bus cost for both battery electric and fuel cell buses along with some cancelled potential funding programs are contributing factors to the increase in projected cost estimates and the widening funding gap.

Figure 6: Program Build Sheet Summary (Millions)

Investment Type	Investments	ZEB Transition Forecast Cost (2025)	Program Estimated Cost	Potential Grant Funding	Funding Gap (Shortfall)
Revenue Bus	$292	$1,861	$2,153	$1,339	($522)
Infrastructure	$103	$238	$341	$133	($105)
Supporting Projects	$21	$36	$57	$0	($36)
Program Total	**$417**	**$2,135**	**$2,551**	**$1,472**	**($663)**

**Includes some pending investments to be reconciled in the upcoming fiscal year*

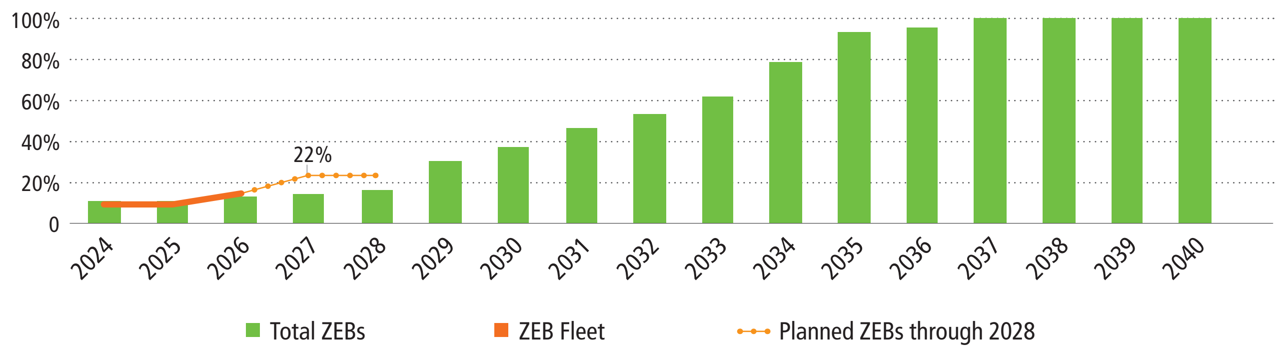
The District continues to actively explore funding options for complying with the California Air Resources Board's Innovative Clean Transit (ICT) regulation by 2040. The District will continue to monitor the current financial climate and will continuously update its projections based on available funding opportunities. Additionally, the District will monitor bus purchases against available funding and strategically use earned CARB credits to substitute the purchase of a zero-emission bus with a diesel bus on a per credit basis through December 31, 2028, to offset financial risk.

Actual zero-emission bus (ZEB) purchase transactions and current quotations are the basis in cost estimates for fleet. For bus models that have not yet been developed, estimates will rely on the average costs per category specified in the ZEB Transition Plan.

A provision for risk mitigation measures has been included in infrastructure cost estimates. Annual increases that align with current market conditions over the next five years are reflected in projections for both fleet and infrastructure cost. After this period, the annual escalation rate will be adjusted to reflect the consumer price index and will be assessed against market trends to ensure ongoing oversight of program-related risks.

The transition schedule has been updated to show the original Transition Plan baseline fleet of 636 and reflect the Realign 2.0 active fleet of 554. Additionally, ZEB bus purchases cancelled in response to cost increase and funding shortage have been removed and the District now anticipates 124 ZEBs in service by 2028. ZEB bus purchases will be evaluated annually considering the transition plan guiding principles and ICT ZEB purchase ramp-up requirements balanced with available funding opportunities. The District is loosely monitoring the financial landscape to assess transition plan impacts.

Figure 7: ZEB Transition Plan



ZEB Infrastructure

Infrastructure Project Progress

AC Transit continues to implement Zero Emission bus (ZEB) technologies to support the ZEB Transition Plan at its facilities.

Currently the Oakland (Division 4) facility, built in 2014, features a hydrogen station capable of fueling thirteen (13) buses within a 24-hour period. An upgrade at this hydrogen station is in the acceptance phase and increases its capacity to fuel over 130 buses in a 12-hour window. This enhancement includes expanding on-site liquid hydrogen storage to 25,000 gallons, upgrading to dual piston cryogenic pumping technology, and installing four new dispensers at the fueling island under a new canopy. In 2020 six (6) DC fast-charging stations that can deliver a maximum output of 62.5 kW each, or 125 kW when two are connected in a daisy chain configuration were added. Plans include installing a micro-grid power system, which is currently in design, and more charging infrastructure to support up to fifty (50) buses.

Figure 8: Existing Facilities Technology

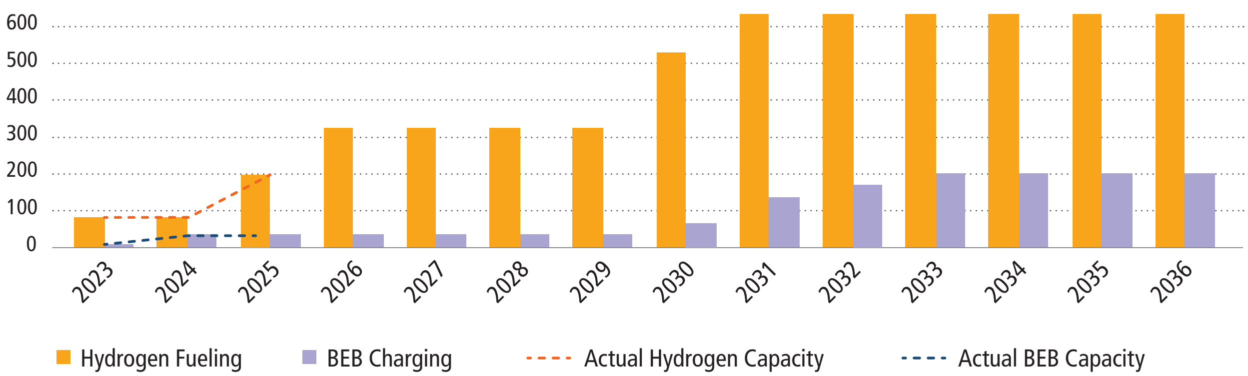
	BATTERY ELECTRIC BUS		FUEL CELL ELECTRIC BUS	
Facility »	**Oakland**	**Emeryville**	**Oakland**	**Emeryville**
Bus Energy Capacity	6 Buses at a time	26 Buses at a time	130+ Buses per Fueling Window	65+ Buses per Fueling Window
In Service Date	2020	2024	Acceptance in 2026	2020
Type of Fuel	PG&E Grid Electricity	PG&E Grid Electricity	Liquid Hydrogen	Liquid Hydrogen
Energy Supply	2500 Amp Service	4000 Amp Service	25,000 Gal LH2 Tank	15,000 Gal LH2 Tank
Technology	Stand-Alone Chargers	Charging Blocks with Dual Port Dispensers	Upgrading to Cryogenic Pumping	Cryogenic Pumping
Capital Cost (Build)	$896,937	$5,153,257	$9,851,230	$4,458,115
Core Hardware	6 - ChargePoint 62.5 kW CPE 250 Stand-alone Chargers	13 – ChargePoint 160 kW Express Plus Chargers connected to 13 – Powerlink Dual Dispensers	Dual ADC MP-100 Duplex Cryogenic Pumps	Dual ADC MP-100 Simplex Cryogenic Pumps
Related Hardware	600 Amp Distribution Panel with 6 - 100 Amp Circuits	4000 Amp Distribution Panel with 13 – 300 Amp Circuits	Pressure Build Vaporizers Four Dispensers	Pressure Build Vaporizers Two Dispensers
Dispensing Location	West Wall of Facility	East & South Walls of the Facility	Fuel Island	Fuel Island
Funding Source	Federal and Regional	State and Regional	Federal, State, and Regional	State and Regional
Annual O&M Costs			$222,596	$220,812

The Emeryville (Division 2) facility currently has hydrogen fueling capacity to accommodate sixty-five (65) buses per fueling window and up the twenty- six (26) depot DC fast-charging stations to ensure that we have sufficient fueling capacities and maintenance facilities in place.

Current infrastructure improvement projects underway give the District fueling and charging capacity above its expected 124 ZEBs in 2028. (See Appendix C) Future planned infrastructure projects will be closely monitored, with adjustments made as needed to account for funding availability, meeting FTA Transit Asset Management (TAM) state of good repair priorities, inflationary trends, and ongoing technological advancements.

The ZEB transition schedule indicates infrastructure projects are planned to be complete by 2036 ahead of full ZEB bus fleet compliance in 2040. This ensures that we have sufficient fueling capacities and maintenance facilities in place to provide ZEB bus repairs to support service as well as training and education workforce development efforts. The District will continue monitoring all projects and adjust accordingly to align Transportation Asset Management (TAM) priorities, inflationary trends, and ongoing technological advancements. Below is a schedule outlining plans for implementing fueling and charging capacity.

Figure 9: Projected Capacity for Fueling and Charging Zero-Emission Buses by Year



Infrastructure Project Strategy

The infrastructure design plans for Fuel Cell Electric Buses (FCEBs) focus on transitioning to dual piston cryogenic pumps that supply hydrogen fuel to multiple dispensers located at the fueling island. To tackle the pressure settling issue, these dispensers interact in real-time with the buses via an RFID ring. This setup optimizes the fueling process by monitoring and controlling flow rates, temperatures, and pressures effectively. Every station upgrade or new build will feature a 25,000-gallon liquid hydrogen storage tank. While this larger storage tank won't be utilized to its full capacity initially, it offers the flexibility needed to accommodate the expanding fleet without necessitating additional station hardware upgrades. The aim is to enhance station throughput to support approximately 150 buses during a daily fueling schedule that allows for consecutive 8-minute fills.

For Battery Electric Buses (BEBs), the infrastructure design criteria involve dual-port dispensers arranged to accommodate two BEBs simultaneously. Each pair of charging positions will be powered by a charger that can deliver up to 200 kW, complemented by a charge management system that ensures the buses are ready for daily operations.

The District is currently planning on-site power generation to support BEB deployment at facilities where grid power is either unavailable or unreliable. Moreover, this on-site generation could reinforce the District's BEB initiatives, aligning with the approved Zero Emission Bus (ZEB) Transition Plan and the operational standards of each division. The District intends to develop an "islanded" microgrid approach, which will be implemented in phases to synchronize with the deployment timeline and related capital costs of the planned BEB fleet expansion.

Additionally, the District plans to fuel its on-site self-generation system using a blended fuel strategy that incorporates both hydrogen and natural gas in varying proportions. Once green hydrogen becomes available, this approach paves the way for a future shift to 100% green and renewable fuel sources. The ability to blend fuels will also enable the District to manage fuel composition effectively, allowing for cost control.

This self-generation strategy aims to create scalable energy generation capacity while achieving significant operational cost savings compared to dependence on utility grid-supplied energy. Furthermore, this strategy reduces reliance on the grid, enhancing energy availability and minimizing risks associated with curtailment or unexpected shutdowns. Ultimately, the improved energy efficiency from this approach will lead to considerable environmental benefits.

The District has laid out various infrastructure projects designed to boost fueling capabilities for hydrogen fuel cell buses and charging capacities for battery electric buses across its four divisions: Emeryville (D2), Richmond (D3), Oakland (D4), and Hayward (D6). Upgrades are also planned for the maintenance bays in each division and the Central Maintenance Facility (CMF). The execution of these infrastructure projects will begin once approved by the Board of Directors as part of the Capital Improvement Plan, followed by phases of planning, design, procurement, and construction.

Other Supporting Projects

The ZEB Program includes various supportive initiatives, such as the Zero Emission Bus University (ZEBU), the modernization of the Training and Education Center (TEC), and transition of non-revenue vehicles to zero emission propulsion. The workforce development section of the report offers deeper insights into both the ZEBU initiative and the TEC modernization efforts.

Figure 10: Supporting Projects Cost

Project Title	Total Project Cost
Non-Revenue Fleet Replacement (ZEV Transition)	$12,800,000
TEC Modernization	$23,000,000

Non-Revenue Fleet Replacement

A transition plan for zero-emission vehicles (ZEV) was developed and presented to the Board in June 2025. This plan is intended to complement the Zero Emissions Bus Transition Plan for the district's non-revenue fleet. Shifting to non-revenue vehicles will facilitate the introduction of zero-emission service and administrative vehicles, which will bolster the district's zero-emission bus initiative while following these guiding principles:

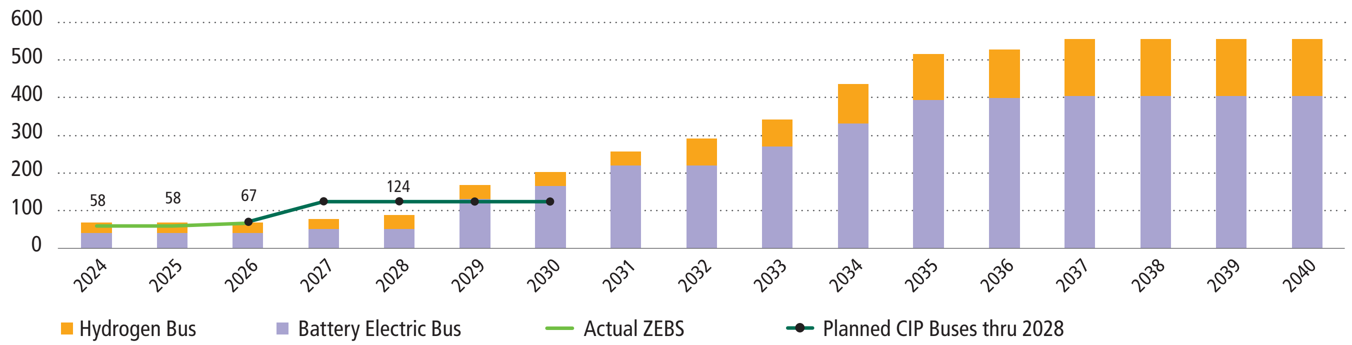
- Replace the fleet per the Federal Transit Administration (FTA) mandated Transit Asset Management (TAM) Plan Performance Targets
- Meet California Advanced Clean Fleets (ACF) Regulation when purchasing vehicles over 8,500 lbs. GVWR
- Procure ZEVs based on funding/vehicle availability, infrastructure technology capabilities, and duty cycle
- Deploy ZEV technology that is the most efficient and sustainable to operate.

Bus Fleet and Performance

Bus Procurement Schedule

The bus replacement schedule is expected to be finished by 2039, in line with the District's Transit Asset Management Plan. Additionally, projects for Zero-Emission Bus infrastructure will be completed before the introduction of new ZEBs to ensure proper fueling, charging, and maintenance support.

Figure 11: Planned Zero Emission Bus Fleet by Year



Bus Procurement Progress

The transition to Zero Emission Buses (ZEB) is overseen by the Board of Directors, which must approve the required funding. As we move into the procurement phase, there may be opportunities to streamline various initiatives once the funds are secured. This phase involves developing technical specifications, issuing bids, awarding contracts, overseeing production, coordinating delivery, conducting inspections, and ultimately accepting the buses from the manufacturer.

Once the buses are accepted, AC Transit staff will prepare them for service, deploying them either directly into operations or for training purposes. If necessary, these buses will also be integrated into active service.

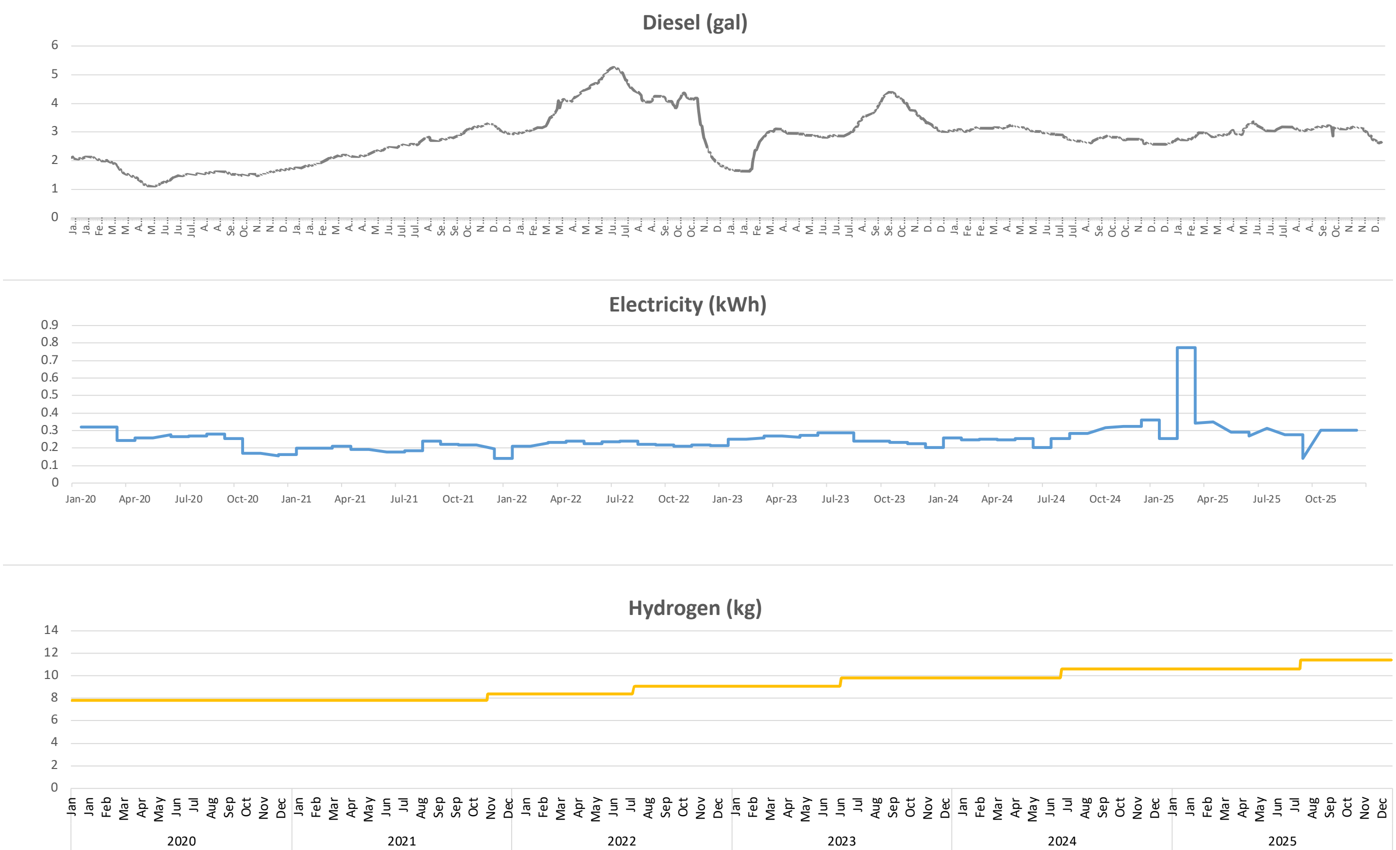
The bus replacement schedule is expected to be completed by 2039, in accordance with the District's Transit Asset Management Plan. Additionally, projects for Zero Emission Bus infrastructure will be finalized before the introduction of new ZEBs to ensure proper fueling, charging, and maintenance support is available.

The District expects to complete bus procurements through year 2028 which will have replaced 124 diesel vehicles (See Appendix B). The original timeline expectation to replace 229 diesel vehicles by this time has been impacted by program risk which the District is currently monitoring. Currently these impacts will not severely affect the performance targets outlined in its Transit Asset Management plan.

Energy Trends

The figure below illustrates the current trends in energy sources. Compared to 2024, the price of diesel and electricity has been flat. In contrast, the prices for hydrogen have both gone up; hydrogen has increased by 8%, from $10.58 to $11.43. These fluctuations in energy costs are significant when evaluating the cost-per-mile metric and assessing overall operational performance.

Figure 12: Energy Price Trend (2020-2025)



Bus Evaluation and Performance Overview

This report looks at 40-foot buses produced between 2016 and 2025. The fleet under review includes a varied mix of fuel cell, battery electric, diesel, and diesel-hybrid technologies. Below, you'll find a performance evaluation table summarizing key statistics for six different fleet groups throughout the calendar year 2024.

Notable findings indicate that the battery electric bus (BEB) fleet delivered the lowest cost per mile. The high voltage batteries (energy storage system) and fuel cell are still under warranty on the ZEBs therefore mitigating the high cost of those parts. The time needed to process warranty claims can vary widely, with a range of several months to up to a year, which complicates direct comparisons. However, as mileage builds up, warranty costs are gradually reflected in the CPM calculation over time. Although the initial purchase cost of BEB buses was substantial, this expense tended to decrease rapidly as the mileage increased (see the subsequent graph for details).

Figure 13: ZEB Performance Evaluation (2025)

FLEET	DIESEL (BASELINE)	DIESEL HYBRID	FUEL CELL ELECTRIC (FCEB)	BATTERY ELECTRIC (BEB)
Bus Quantity	35	25	30	28
Life-to-Date Mileage (Per Bus Avg)	365,786	388,213	127,960	49,447
2025 Mileage	1,845,167.40	1,113,716.50	825,249	445,921
Cost/Mile (w/ credits)	2.13	2.28	2.75	2.10
Fleet Availability	89.21%	85.59%	57.37%	65.19%
Reliability (MBCRC)	14,761	7,843	5,394	5,791
MPG (DGE)	4.70	5.42	7.73	13.91

An in-depth analysis of bus technology trends was conducted using the cost-per-mile metric. The accompanying figure displays the normalization patterns linked to various fuel sources, with a lightly shaded area highlighting the range of values for buses within each fleet.

Currently, the District is facing increased variability and uncertainty within its battery electric bus (BEB) and fuel cell electric bus (FCEB) fleets compared to their diesel and hybrid counterparts. This heightened variability largely stems from limitations in sample size, which includes data from 35 diesel buses, 25 hybrid buses, 30 FCEB buses, and an additional unspecified number of buses in another category.

Overall, diesel and hybrid buses tend to show greater consistency and lower costs compared to FCEB buses. However, the performance of FCEB buses could catch up to that of diesel and hybrid buses as they accumulate more mileage. BEBs, while exhibiting significant cost variability, show a downward trend in their cost-per-mile. Since most BEBs are relatively new, further research will be essential as more service miles are logged to accurately determine their long-term costs.

ZEB Fleet Evaluation

This report aims to broaden the evaluation of zero-emission bus (ZEB) technologies beyond the initial 5X5 control fleet referenced in the ZETBTA reports. The primary emphasis of this analysis is the assessment of zero-emission buses; however, additional control buses and fleets have been incorporated to enrich the study. The analysis encompasses all 40-foot buses manufactured between the years 2016 and 2025, including a variety of propulsion technologies: fuel cell, battery electric, diesel, and diesel-hybrid systems. Unless otherwise indicated, this assessment pertains to various propulsion technologies and bus types for the calendar year 2025 (January 1, 2025, to December 31, 2025).

The matrix below offers further specifications regarding the bus fleet considered in this report. It details the service activation dates, cumulative life-to-date mileage, and design specifications for the one hundred and eighteen (118) buses analyzed. It is essential to recognize that AC Transit typically requires an eighteen (18) month lead time from the date of order to service activation, reflecting the average timeline observed for bus orders, delivery, and acceptance in recent procurements. An in-depth analysis of bus technology trends was conducted using the cost-per-mile metric. The accompanying figure displays the normalization patterns linked to various fuel sources, with a lightly shaded area highlighting the range of values for buses within each fleet.

Figure 14: Fleet Specifications

FLEET	DIESEL (BASELINE)	DIESEL HYBRID	FUEL CELL ELECTRIC (FCEB)		BATTERY ELECTRIC (BEB)		
			7000	7030	8000	8006	8008
Series Grouping	1600	1550	7000	7030	8000	8006	8008
Year Model	2018	2016	2019	2022	2019	2021	2022
Manufacturer	Gillig	Gillig	New Flyer	New Flyer	New Flyer	Gillig	Gillig
Bus Purchase Cost	$488,247	$699,060	$1,156,044	$1,212,161	$938,184	$963,009	$964,859
Energy/ Fuel Capacity	120 gal	120 gal	37 kg	37 kg	466 kW	444 kW	444 kW
Range Specification	450 miles	500 miles	300 miles	300 miles	180 miles	130 miles	130 miles
Propulsion Design	Conventional Diesel	Diesel/ Battery	Battery Dominant	Battery Dominant	Battery	Battery	Battery
Battery Design	N/A	Lithium-Ion	Lithium-Ion	Lithium-Ion	Lithium-Ion	Lithium-Ion	Lithium-Ion
Engine/Powerplant	Cummins	Cummins	Ballard/A123	A123	Xalt Energy	Cummins	Cummins
Transmission/ Propulsion	Voith	BAE	Siemens	Siemens	Siemens	Cummins	Cummins
In Service Date	Jan 2019	Aug 2016	Jan 2020	Dec 2021	May 2020	Sep 2021	Aug 2024
Life-to-Date Mileage	365,786	388,213	162,727	111,491	85,086	56,518	40,288
Funding Source	Federal, Regional, Local	Federal, Regional, Local	State, Regional, Local	Federal, State, Local	Federal, Regional	Federal, State, Local	Federal, Regional

Zero Emission Technologies Environmental Impacts

In recent years, growing concern over greenhouse gas emissions has brought transportation to the forefront as a significant contributor to environmental issues. In response to this pressing challenge, the push to develop and implement zero-emission buses (ZEBs) has gained momentum, presenting a more sustainable and eco-friendly alternative. Unlike conventional buses, which typically rely on diesel or hybrid diesel technology, ZEBs run on electricity or hydrogen fuel cells, generating no greenhouse gas emissions during their operation. This section will explore the environmental impacts of ZEBs in comparison to traditional buses. We will assess various metrics, including greenhouse gas emissions, carbon footprints, and energy consumption rates, to illuminate the environmental benefits of ZEBs and examine the positive effects their adoption could have on our ecosystem.

While it's true that ZEBs produce zero tailpipe emissions (Scope 1), it's crucial to recognize that they are not completely emission-free when we take Scope 2 and Scope 3 emissions into account. Scope 2 emissions refer to the indirect emissions from the production of the electricity or hydrogen fuel that powers ZEBs. On the other hand, Scope 3 emissions pertain to the indirect emissions linked to the manufacturing of materials, parts, and components used in the construction of ZEBs, as well as their eventual disposal.

The actual amount of emissions from these indirect sources can vary based on the energy source used and the production methods employed. Therefore, while ZEBs present a promising path toward mitigating greenhouse gas emissions in transportation, it's vital to evaluate their entire life cycle—including both direct and indirect emissions—to fully understand their environmental impact.

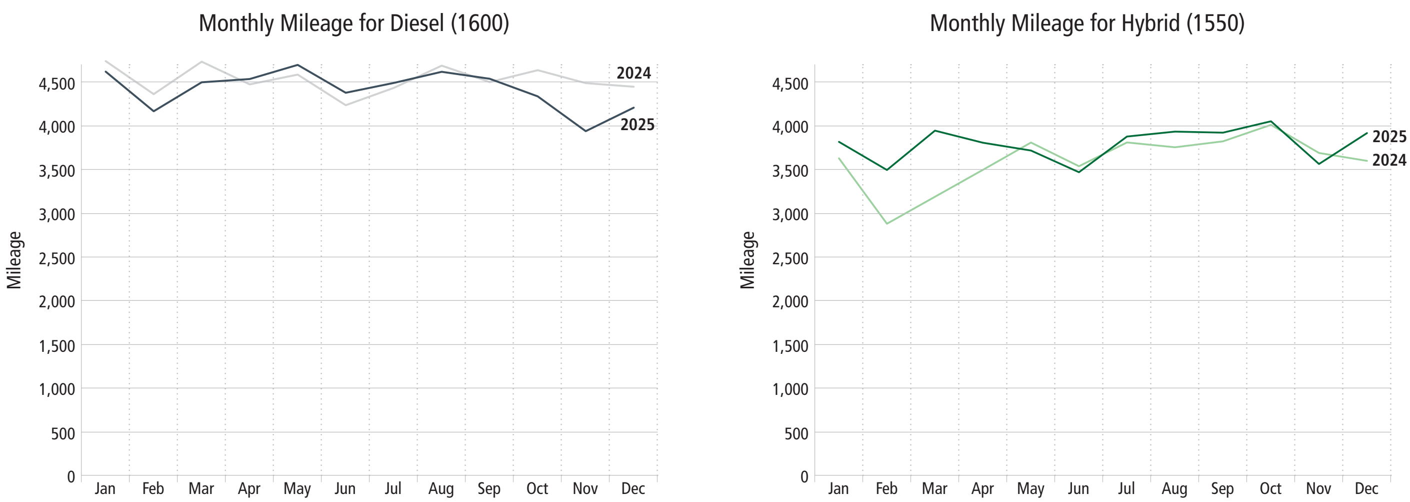
AC Transit initiated a Sustainability Program in 2022 to establish a baseline for life cycle emissions across all District operations, including the ZEB fleet. For this report, we will focus solely on Scope 1 emissions from diesel fuel.

The figure below illustrates the total CO2 emissions offset by the District's ZEB fleet in 2025. Overall, the ZEBs in this study achieved an emissions offset of 1,396 metric tons, which is roughly equivalent to burning 1.55 million pounds of coal or powering 187 homes for an entire year. The FCEB 7030 model was the leading source of emissions offset, primarily due to the number of buses in operation and the miles they covered during the reporting period.

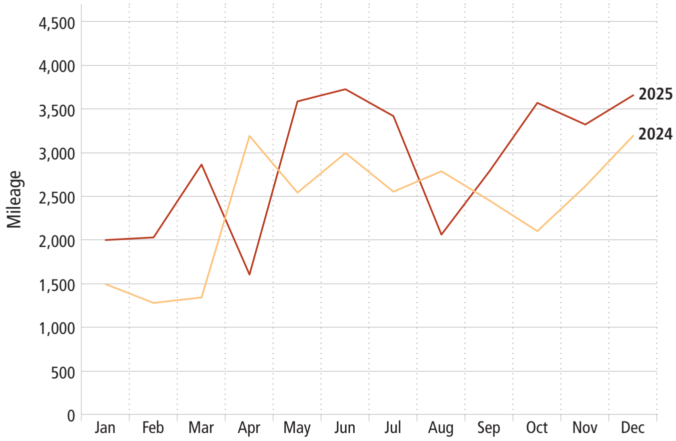
Bus Mileage

Zero-emission buses need to effectively reduce environmental impacts while being efficient and cost-effective to serve as a viable alternative to traditional fossil fuel-powered buses. This section delves into the performance and efficiency of various ZEB technologies, examining aspects such as mileage, fuel efficiency, and energy consumption rates. By comparing these metrics, we can gain a clearer understanding of the strengths and shortcomings of each technology. In the coming years, this performance data will guide our purchasing decisions and shape our plan for transitioning to a 100% zero-emission fleet by 2040.

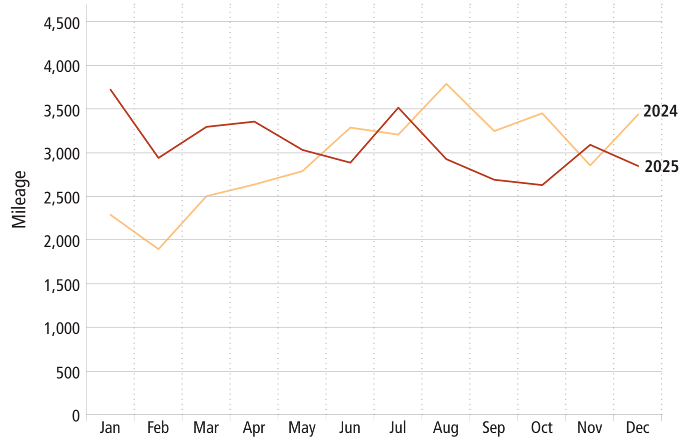
Figure 15: Fuel Monthly Mileage by Technology



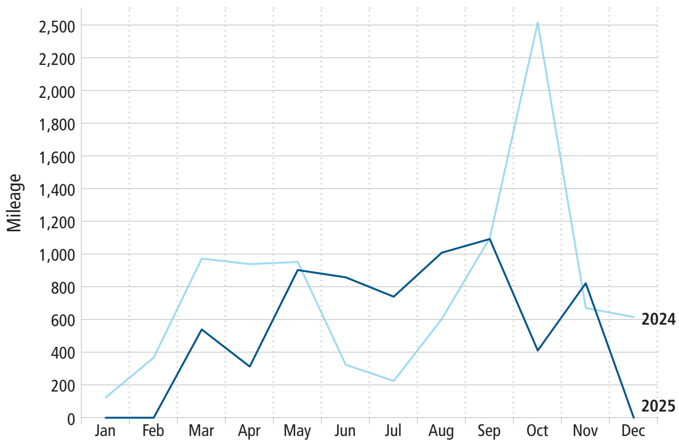
Monthly Mileage for FCEB (7000)



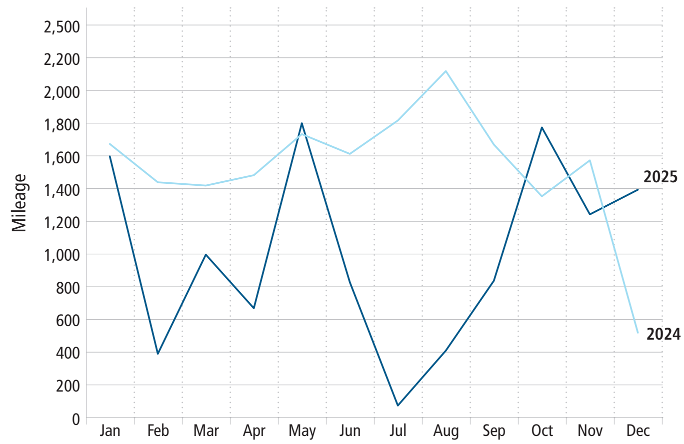
Monthly Mileage for FCEB (7030)



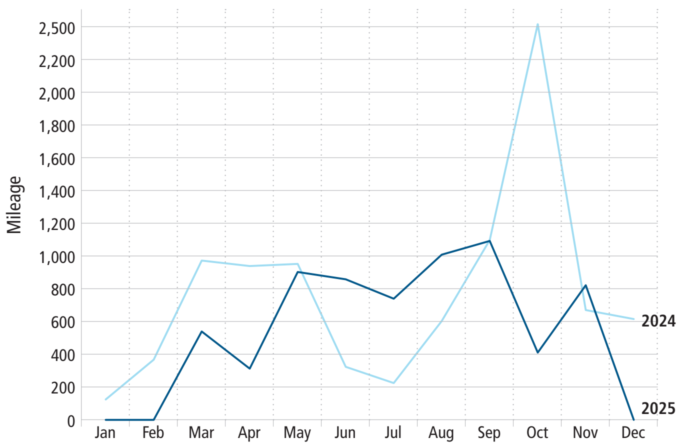
Monthly Mileage for BEB (8000)



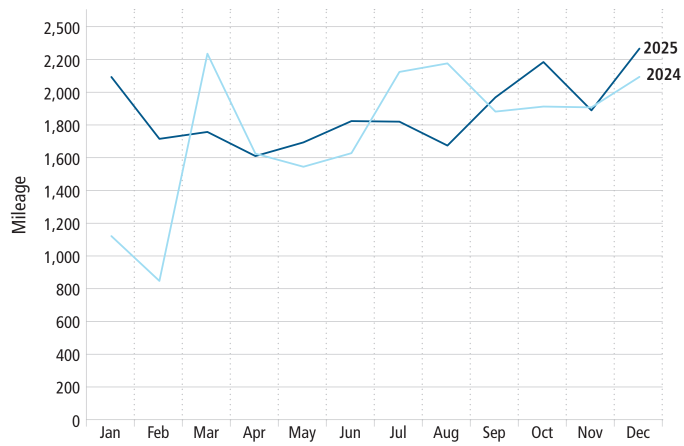
Monthly Mileage for BEB (8006)



Monthly Mileage for BEB (8000)



Monthly Mileage for BEB (8008)



The figure above provides the average monthly bus mileage by technology. Based on this information, the following observations were noted:

- **Diesel (1600)** accumulated the most miles during the period, and this bus type has the highest mileage for most months.
- **Hybrid (1550)** mileage remained consistent, ranging from 3,000 to 4,000 miles per month per bus.
- **FCEB (7000 and 7030)** has a stable monthly mileage between 1500 to 3500 miles.
- **BEB (8008)** starting to become steadily operational since late 2023, with all buses fully deployed in October 2024.

Fuel and Energy Efficiency

Regarding relative performance differences, diesel buses traveled the most miles throughout the year, while the other bus types show variability in their mileage trends. Hybrid and FCEB (7000) bus types show stable mileage growth over the year, while FCEB (7030) and BEB (8006) types show the most variability in mileage.

Firgure 16: Fuel Efficiencies and Equivalent Comparison

		Energy/Fuel	Fuel Efficiency	Efficiency Metric	Equivalent Efficiency	Equivalent Metric
DIESEL		Diesel	4.70	Miles/Gal	4.70	M/DGE
HYBRID		Diesel	5.42	Miles/Gal	5.42	M/DGE
FCEB	**7000**	Hydrogen	6.84	Miles/Kg	7.60	M/DGE
	7030	Hydrogen	7.00	Miles/Kg	7.78	M/DGE
BEB	**8000**	Electricity	0.32	Mile/kWh	12.37	M/DGE
	8006	Electricity	0.39	Mile/kWh	14.76	M/DGE
	8008	Electricity	0.37	Mile/kWh	13.96	M/DGE

The chart above compares the native fuel efficiency and equivalent efficiency of the various bus propulsion technologies.

- BEB 8006 has the highest fuel efficiency, with 14.76 miles per diesel gallon equivalency, followed closely by BEB 8008, which has 13.96.
- FCEB 7000 and 7030 series buses have higher fuel efficiency than diesel and hybrid buses but lower than the BEB types.
- The diesel buses have the lowest fuel efficiency among the bus types listed.

Zero-emission buses, particularly BEB buses, have significantly higher energy efficiencies than diesel-powered buses.

Figure 17: Energy Rate Comparison (Annual Average)

	DIESEL	HYDROGEN	ELECTRICITY
2025	$3.01 / Gal	$11.43 / KG	$0.25 / kWh
2024	$3.01 / Gal	$10.58 / KG	$0.26 / kWh
% Changes	0%	8%	-0.4%

The figure above shows the average annual cost of energy in 2024. Energy prices are difficult to compare because of the inherent differences in energy efficiency between the specific propulsion technologies that use the fuels. Compared to the prices in 2024, we noticed that the diesel price is flat at $3.01, while prices increased for Hydrogen by 8% (from $10.58 to $11.43) and Electricity decreased by 0.4% (from $0.26 to $0.25). This change in energy cost partly contributes to the cost-per-mile calculation changes in the next section.

Maintenance and Operational Cost Analysis

Zero-emission buses must also be cost-effective and environmentally friendly. This section will focus on the cost analysis of different ZEB technologies, including their ongoing maintenance and operational costs. Moreover, we will examine the available energy credits for ZEBs, which could significantly reduce their operational costs. By comparing these metrics, we can better understand the economic feasibility of adopting different ZEB technologies, identify which technologies have the lowest operational costs, and provide the best value for public resources.

Figure 18: Operational Cost/Mile Totals (January – December 2025)

METRIC	DIESEL	HYBRID	FCEB		BEB		
	1600	1550	7000	7030	8000	8006	8008
Total Costs (Fleet-Wide)							
Maintenance	1,856,855	1,777,729	172,180	586,377	69,244	27,712	309,932
Labor Hours	14,421	8,246	948	3,117	686	388	2,718
Energy (Fuel)	1,181,039	618,074	328,836	978,673	15,521	13,451	287,232
Total	3,052,315	2,404,049	501,964	1,568,167	85,451	41,552	599,882
Costs per Mile							
Maintenance	1.01	1.60	0.86	0.94	3.56	1.38	0.76
Energy (Fuel)	0.64	0.55	1.63	1.57	0.80	0.67	0.71
Total	1.65	2.15	2.49	2.51	4.36	2.05	1.47
Bus Count	35	25	10	20	5	2	21
Average Daily Bus Count	24.89	18.20	3.21	9.60	1.33	1.23	6.98
Total Mileage	1,845,167	1,113,717	201,183	624,066	19,459	20,123	406,339

The chart above shows a detailed list of bus fleet cost averages, CPM performance, and daily bus availability in service. Based on this information, the District observed the following:

- The Hybrid 1550 has the lowest energy (fuel) cost per mile, followed by the Diesel 1600 and BEB 8000 buses. The FCEB 7030 has the highest fuel cost per mile.
- The FCEB 7030 has the lowest maintenance cost per mile, followed by the Diesel 1600 and Hybrid 1550. The highest maintenance cost is BEB 8000.
- The total cost per mile is lowest for the Diesel 1600, followed by the Hybrid 1550.

The table below shows the percentage change in 2025 compared to 2024. The primary disparity in Cost per Mile between 2024 and 2025 stems from a substantial cost increase for BEB usage. For BEB 8008, the CPM decreased by 22,8%. This drop in cost is primarily attributed to the gradually maturing BEBs that enter service in late 2023. These buses initially did not have sufficient supporting facilities to be operational, and now they can go into service in 2024.

Figure 19: Operational Cost/Mile year-over-year percent changes from 2024 to 2025

METRICS	DIESEL (BASELINE)	DIESEL HYBRID	FUEL CELL ELECTRIC (FCEB)		BATTERY ELECTRIC (BEB)		
	1600	1550	7000	7030	8000	8006	8008
Total Costs (Fleet-Wide)							
Maintenance	-34.4%	-1.2%	-46.0%	-15.9%	-19.2%	-40.1%	-38.0%
Labor Hours	-11.4%	10.2%	-32.4%	-0.5%	45.5%	23.0%	-23.1%
Energy (Fuel)	-3.0%	1.8%	7.5%	9.2%	-2.9%	-43.5%	5.2%
Total	-24.9%	-0.4%	-19.9%	-1.8%	-16.4%	-41.0%	-22.8%
Cost per Mile							
Maintenance	-32.6%	-6.2%	-46.5%	-17.8%	-16.3%	10.0%	-39.8%
Energy (Fuel)	-0.2%	-3.3%	6.5%	6.7%	0.6%	3.7%	2.2%
Total	-22.8%	-5.5%	-20.5%	-4.0%	-13.6%	7.8%	-25.0%
Bus Count	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg Daily Bus Count	-2.8%	3.7%	-0.7%	3.0%	-16.1%	-15.2%	5.5%
Total Mileage	-2.8%	5.3%	0.9%	2.3%	-3.5%	-45.5%	2.9%

Warranties and Energy Credits

An essential factor to adjust when calculating and comparing costs is the recovered costs through warranty claims and low-carbon fuel standard (LCFS) credits. The chart below shows the warranties and credits recovered for each propulsion technology.

- Top 40 warranties claim all come from BEB or FCEB and involve systems ranging from electronics, fuel systems, and power plants.
- Overall, cost recovery was most significant for BEB, which was more than $599,000.

Figure 20: ZEB Recovery Total: Warranties and LCFS Credits

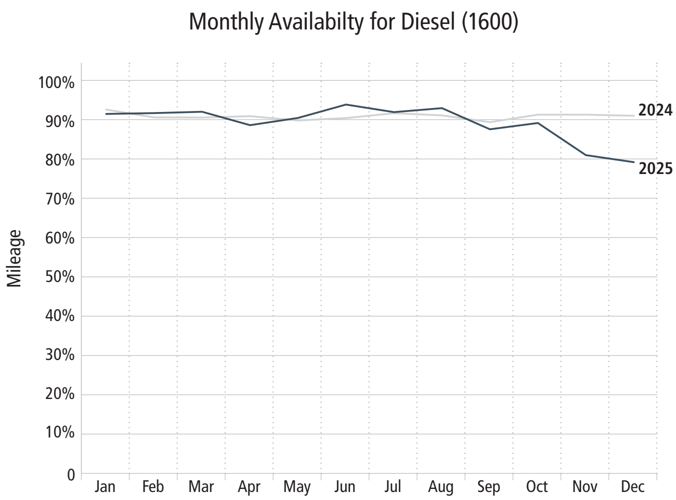
TECHNOLOGY		WARRANTY CLAIMS	WARRANTIES	LCFS NET CREDITS	TOTAL RECOVERY
DIESEL	**1600**	17	$22,296	$0.00	$22,296
HYBRID	**1550**	9	$14,017	$0.00	$14,017
FCEB	**7000**	16	$29,642	$0.00	$30,235
	7030	48	$186,072	$0.00	$187,887
BEB	**8000**	18	$157,522	$3,325.53	$161,045
	8006	20	$68,073	$3,439.06	$74,524
	8008	192	$670,207	$69,443.04	$739,155

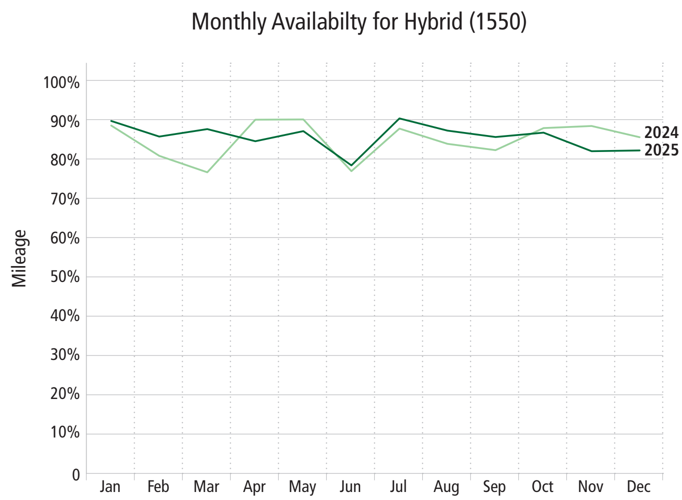
Bus Availability

In addition to environmental considerations, the reliability and availability of zero-emission buses (ZEBs) are critical when evaluating their potential as a replacement for traditional and hybrid diesel buses. ZEBs are a relatively new technology and are still undergoing development and refinement, which can affect their reliability and availability in various ways.

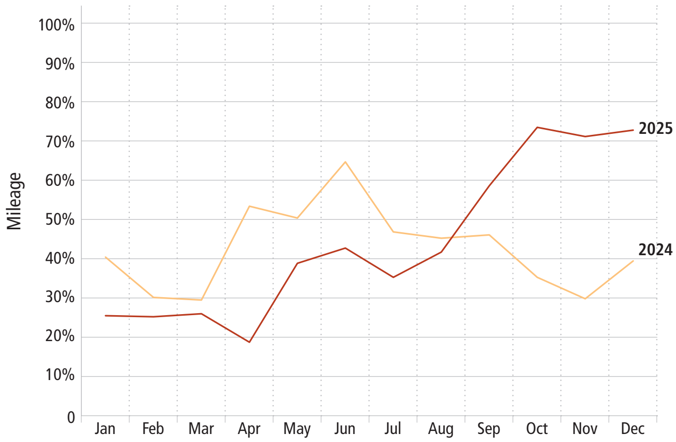
In this section, we will examine the reliability and availability of ZEBs based on data from existing deployments. We will evaluate their performance in terms of their ability to operate consistently and meet their required schedules and examine the factors contributing to their reliability and availability. By analyzing the data, we can gain insight into the challenges and opportunities of using ZEBs and identify areas for improvement to make ZEBs a more reliable and available option for sustainable transportation.

Figure 21: Monthly Bus Availability by Technology (2025)

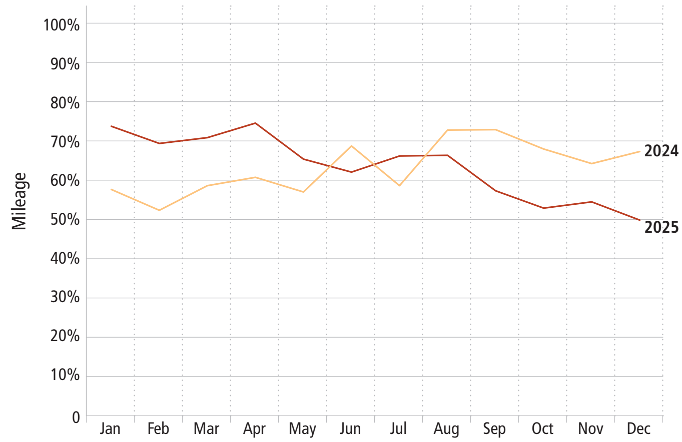




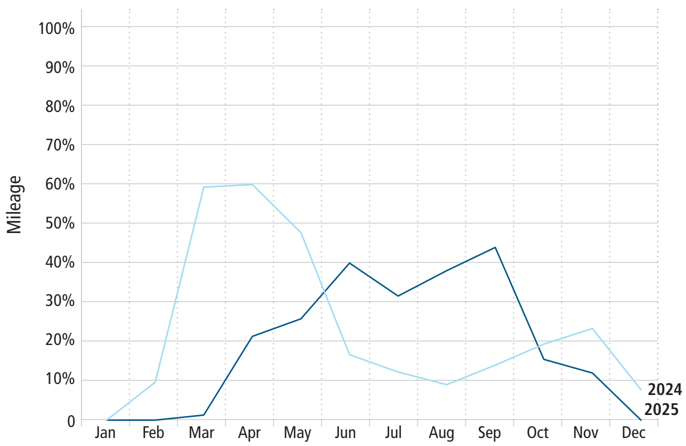
Monthly Availabilty for FCEB (7000)



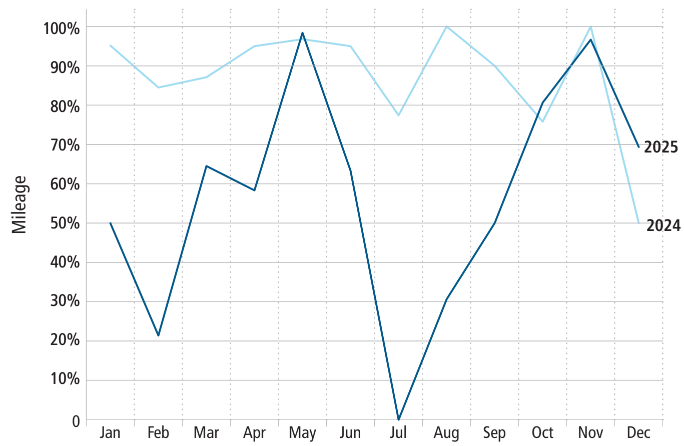
Monthly Availabilty for FCEB (7030)



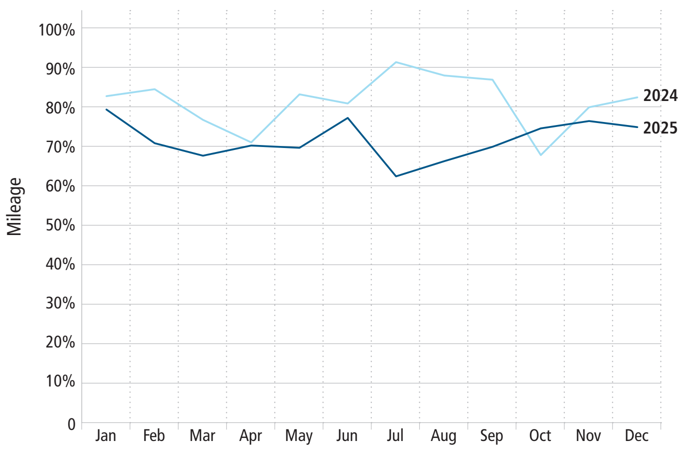
Monthly Availability for BEB (8000)



Monthly Availability for BEB (8006)



Monthly Availability for BEB (8008)



The figure above provides the availability by bus technology, where the District observed the following:

- Diesel and hybrid buses have the highest monthly availability rates among all the fleet types, with diesel averaging 89% and hybrid at 85% for 2025.
- FCEB 7000 and 7030 have lower monthly availability rates than diesel and hybrid buses, with FCEB 7000 averaging 45% and FCEB 7030 at 63%.
- Battery electric buses (BEBs) have variable availability, with BEB 8000 averaging 19%, BEB 8006 at 57% and BEB 8008 at 72%.

One of the most critical indicators of reliability is the availability of service, which is whether a bus can make a morning pull-out. Morning pull-out refers to the first bus trip of the day, which is often the busiest and most critical regarding meeting schedules and ensuring that passengers can get to their destinations on time. If a bus cannot make the morning pull-out, it can cause delays and disruptions that can have ripple effects throughout the day. Therefore, it is essential to ensure that ZEBs are reliable enough to make morning pull-out consistently. This can be affected by various factors, such as charging infrastructure, routine maintenance, and unscheduled repairs. By analyzing data on ZEB reliability and availability, we can identify patterns and trends that can help us better understand the factors contributing to reliable performance and develop strategies to improve ZEB reliability.

The largest contributor to the low availability the ZEB fleet is experiencing is because of the length of time it is taking to repair the vehicle. Long lead time on batteries and mid-life repairs to the fuel cell being the main items.

Bus Reliability

Another critical reliability indicator is the number of chargeable road calls a bus experiences throughout the year. Chargeable road calls refer to situations where a bus cannot continue or experiences a malfunction while in service and needs to be taken off the road for repairs. While some road calls are unavoidable, road calls can result in service disruptions and inconvenience for passengers, as well as increased Maintenance and repair costs for transit agencies. In addition to identifying the number of road calls a ZEB experiences, tracking the cause of each road call is essential, as this can help pinpoint any underlying issues or trends that need to be addressed. By understanding the factors contributing to road calls, the District can develop initiative-taking strategies to reduce the number of road calls, increase reliability, and improve the overall performance of ZEBs.

Because road calls are typically normalized with mileage, this metric should be reported as the miles between chargeable road calls (MBCRC). The higher the MBCRC, the better, as it implies that a bus remains operational longer before an issue occurs. The chart on page 23 (Figure 22) shows the total road calls and MBCRC across the study fleets.

Figure 22: Miles Between Chargeable Road Calls (January – December 2025)

TECHNOLOGY		Major	Other	Total	Mileage	MBCRC
DIESEL		11	114	125	1,845,167	14,761
HYBRID		21	121	142	1,113,717	7,843
FCEB	7000	3	32	35	201,183	5,748
	7030	17	101	118	624,066	5,289
BEB	8000	0	3	3	19,459	6,486
	8006	0	2	2	20,123	10,062
	8008	7	65	72	406,339	5,644

Based on the road call information, the District observed the following:

- Diesel buses perform great, at about 14,761 miles between chargeable road calls.
- The electric buses (BEB) have the least number of road calls, but the MBCRC number is also high because most buses are new, with the 8000 and 8006 fleets consisting of only a few buses.
- The hydrogen-powered buses perform the lowest, traveling approximately 5,000 miles between road calls.

Figure 23: Road Calls By System (January – December 2025)

SYSTEM	DIESEL	HYBRID	FCEB		BEB			TOTAL
			7000	7030	8000	8006	8008	
Common System Failures	70	80	16	59	1	2	33	261
Engine/Fuel Cell System	54	40	9	26	0	0	3	132
Fuel System	0	0	5	17	0	0	0	22
High Voltage System	15	0	5	11	2	0	35	68
Transmission/Electric Drive	3	5	0	5	0	0	1	14
Total	**142**	**125**	**35**	**118**	**3**	**2**	**72**	**497**

These are some examples of failures for different buses:

- For diesel buses, most common failure includes:
  - Brakes
  - Engine problem (check engine light on)
  - Air conditioning
  - Air leak/pressure
- For hybrid buses, most common failure includes:
  - Engine problem (check engine light on)
  - Coolant System
  - Fumes in Bus has problems and need to replace

- For FCEBs, most common failure includes:
    - Hydrogen fuel system (including high pressure, filter problem, circulation blower etc)
    - Engine problem (check engine light on)
    - Battery (mostly warranty repair)
- For BEBs, most common failure includes:
    - Electrical system problem
    - Battery related problem

The chart above (Figure 23) groups the road calls into five major systems, which allows us to evaluate the reliability of the zero-emission technology systems on the buses. This is a simple method to see how these new systems compare, where the District observed the following:

- Common system failures found on conventional and zero-emission buses are among the most significant contributors to road calls.
- Zero-emission propulsion system failures on the FCEB and BEB were lower than the Diesel propulsion system failures.
- Zero-emission technology systems are not less reliable than conventional technology.

Clean Corridors ZEB Deployments

The District's landmark Clean Corridors Plan ensures that disadvantaged communities across our service area are the first to receive zero-emission bus service. The California State Legislature passed SB 535 in 2012, requiring 25 percent of Cap & Trade program investments to be spent in Disadvantaged Communities (DACs). The legislation carried a methodology for identifying those communities' using information about income, race, pollution, and other factors. The state routinely updates state-wide maps of communities they identify as DACs. The focus on investments in disadvantaged communities aims to improve public health, quality of life, and economic opportunity in California's most burdened communities while reducing pollution that causes climate change.

The deployments feature lines only assigned to communities identified as DACs in the AC Transit Board-adopted Clean Corridors Plan (SR 20-017). By prioritizing ZEB deployment in these areas, the plan aims to reduce the environmental impact of transit operations, improve air quality, and enhance the mobility of underserved communities while promoting social equity. The figure below illustrates which lines had buses from this program deployed in 2025. The results indicate that Lines 51B, 6, 88, 12, 18 and 29 had the highest number of deployments within the Clean Corridors program, which meets the compliance of the DAC assignments. These lines were chosen for the following reasons:

1) Serve disadvantaged communities that could benefit from reduced emissions from ZEBs
2) They have high ridership.
3) They are typically assigned 40-foot buses.
4) They are generally flat and most of the lines go no higher than the Macarthur/580 corridor.

DAC Corridors Distribution of Zeb Trip Deployments

The primary lines for the core service network in East Oakland have been operating with weekday schedules since August 2020. The emergency service (7-day Sunday levels) adjusted the schedule to reduce pass-ups as higher ridership returned to the lines.

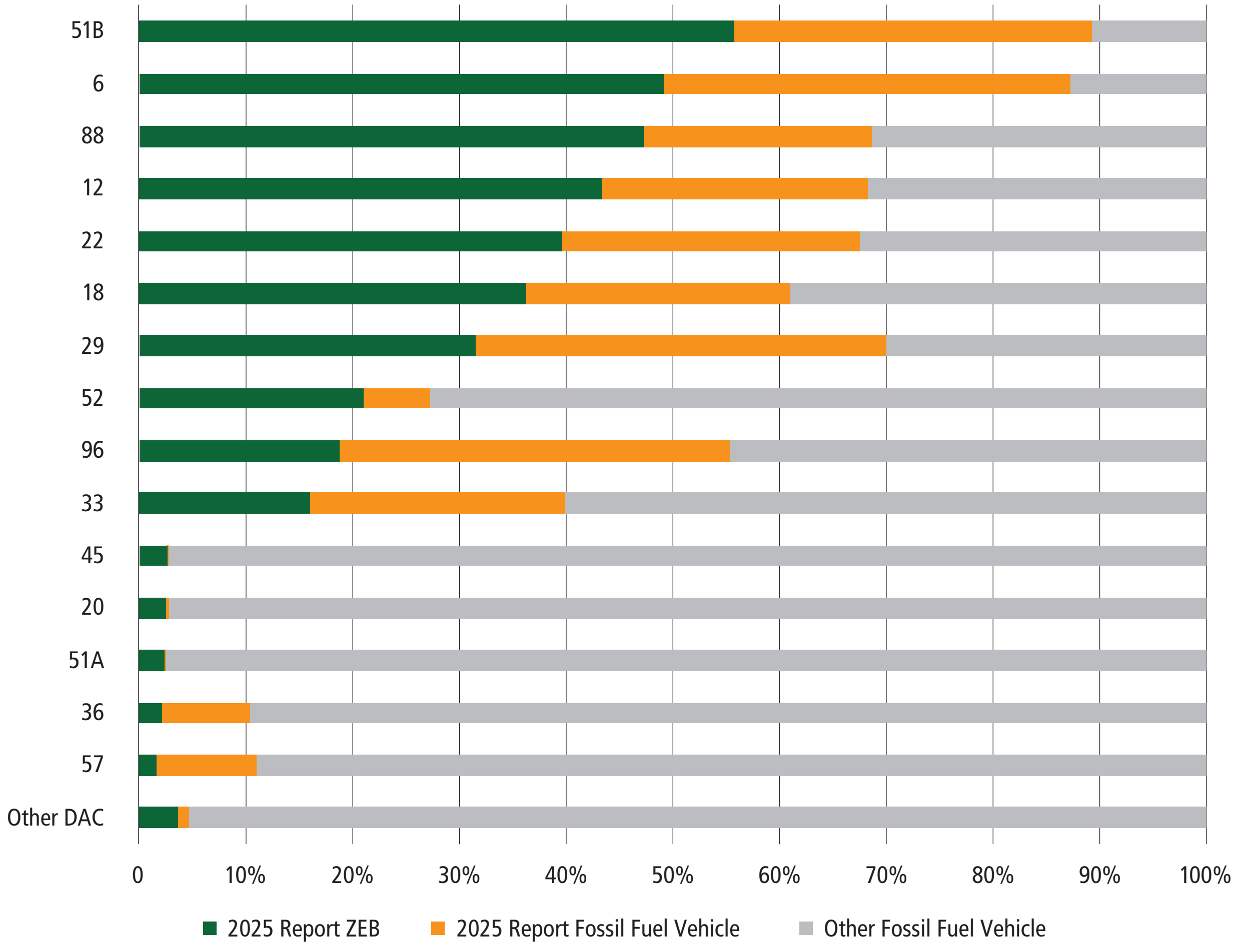
The chart below tracks how the ZEBs were deployed in 2025. Each route was classified as serving a DAC or another route, and the proportion of trips on a DAC or another route was calculated. The results show that over 90% to 99% of ZEB deployments occurred on DAC routes. This means we meet the goal of utilizing ZEBs in Disadvantaged Communities as outlined in the Clean Corridor Plan.

Figure 24: Zeb Deployment by Route Type (January – December 2025)

		DAC Route	Other Routes
DIESEL		45.25%	54.75%
HYBRID		85.40%	14.60%
FCEB	**7000**	91.63%	8.37%
	7030	92.63%	7.37%
BEB	**8000**	95.14%	4.86%
	8006	96.08%	3.92%
	8008	96.70%	3.30%

The deployment of buses to the DAC routes answers how we use the available resources. The chart below (Figure 25) demonstrates the trip distribution of the ZEB fleets on our DAC routes, where routes 51B, 6, 88, 12, 18 and 29 experienced more than 30% of the trips assigned to a zero-emission bus.

Figure 25: DAC Corridors Distribution of ZEB Deployments

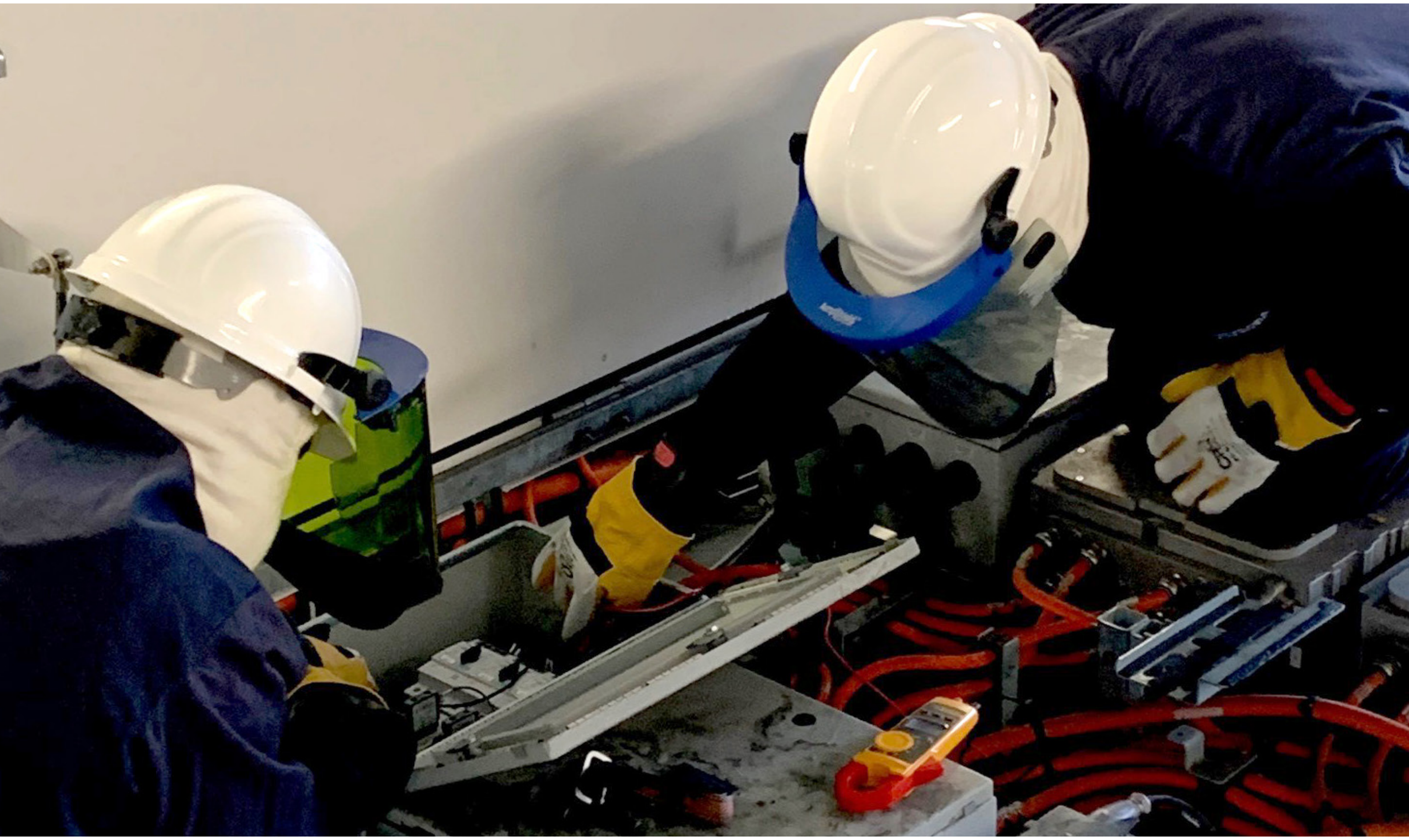


Workforce Development

AC Transit recognizes that a key part of achieving success lies in marrying investments in both rolling stock and infrastructure with a commitment to transforming the workforce necessary to effectively operate and maintain a zero-emission bus (ZEB) fleet. In 2023, the District secured a federal grant of $25.5 million, aimed at creating the nation's leading clean transit training facility and program, known as "Zero-Emission Bus University (ZEBU)." This funding will also support the acquisition of 25 hydrogen fuel cell buses, with $1.3 million earmarked for workforce development initiatives. The goal is to bring ZEBU to fruition by 2028.

ZEBU will provide a unique opportunity for local residents without advanced degrees to enter the green economy, offering competitive wages and essential benefits, including healthcare. Moreover, AC Transit's State of California Mechanic Apprenticeship has now gained full accreditation as a college program, recognized by Chabot College in Hayward, California.

ZEBU is central to our strategy to bolster zero-emission bus services throughout the region. In the coming years, AC Transit aims to pursue $100 million in federal investments to roll out emission-free bus services, enhancing air quality, public health, and overall quality of life in the East Bay. This significant funding will include $5 million specifically directed towards an innovative workforce training and development program designed to equip transit workers with the skills needed for operating and maintaining advanced ZEB fleets.



Appendix A: Zero Emission Technology Investment (Millions)

Project Type	Scope	Time Period					Total
		2005 - 2015	2016 - 2019	2017 - 2022	2018 - 2022	2023-2026	
Vehicles	FCEB	$31,000,000	$12,900,000		$23,000,000	$182,000,000	$248,900,000
	BEB		$5,300,000	$3,000,000	$22,000,000	$13,000,000	$43,300,000
Infrastructure	D2 FCEB	$10,300,000	$3,200,000		$18,000,000		$31,500,000
	D2 BEB			$300,000	$2,000,000		$2,300,000
	D4 FCEB	$20,400,000				$10,800,000	$31,200,000
	D4 BEB		$1,600,000			$13,400,000	$15,000,000
	D6 FCEB					$14,000,000	$14,000,000
	Maint.Bays					$9,200,000	$9,200,000
Supporting Projects	Other					$21,240,000	$21,240,000
		$61,700,000	$23,000,000	$3,300,000	$65,000,000	$263,640,000	$416,640,000

Appendix B: Board Approved Bus Procurement through 2028

Year	Project ID	Description	Status
2025	2234	Purchase (47) 40ft Fuel Cell Buses	On Order
2025	2235	Purchase (9) 60ft Fuel Cell Buses	Acceptance
2025	2236	Purchase (18) 40ft Diesel Buses	Cancelled
2026	692	Purchase (10) 35ft Battery Electric	On Order
2026	720	Purchase (48) 40ft Fuel Cell Bus	Cancelled
2026	721	Purchase (23) 60ft Artic Fuel Cell	Planned
2026	738	Purchase (19) 40ft Diesel Buses	Planned
2027	722	Purchase (54) 40ft Fuel Cell Bus	Planned
2027	723	Purchase (55) 40ft Fuel Cell Bus	Planned
2028	724	Purchase (25) 40ft Fuel Cell Bus	Planned
2028	725	Purchase (10) 40ft Fuel Cell Bus	Planned

Appendix C: Board Approved Infrastructure Projects Through 2028

Year	Project ID	Description	Status
Prior	2184	D4 ZE Infrastructure	Design
Prior	2193	D6 Hydrogen Station Development	Design
Prior	2198	Rehab Maintenance Bays for ZEBs	Design
Prior	2204	TEC Modernization	Design
Prior	2211	D4 H2 Upgrade	Construction
2027	0739	D2 Battery Electric Storage System	Planned

Appendix D: ZEB Investment Build Sheet

Investment Type	Investments	ZEB Transition Forecast Cost (2026)	Program Estimated Cost	Potential Grant Funding	Funding Gap (Shortfall)
Revenue Bus	$292,200,000	$1,860,760,304	$2,152,960,304	$1,338,815,609	($521,944,695)
Existing FCEB	$248,900,000	$0	$66,900,000	$0	$0
Existing BEB	$43,300,000	$0	$30,300,000	$0	$0
Diesel Bus Replacement with ZEB	$0	$1,860,760,304	$0	$1,338,815,609	
Infrastructure	$103,200,000	$238,228,936	$341,428,936	$133,079,303	($105,149,633)
Division 2	$36,100,000	$37,045,106	$73,145,106	$0	($37,045,106)
Charging Stations	$2,300,000	$22,785,106	$25,085,106	$0	($22,785,106)
Hydrogen Stations	$31,500,000	$11,408,000	$42,908,000	$0	($11,408,000)
Maintenance Bays	$2,300,000	$2,852,000	$5,152,000	$0	($2,852,000)
Division 3	$0	$20,401,000	$20,401,000	$0	($20,401,000)
Hydrogen Stations	$0	$14,697,000	$14,697,000	$0	($14,697,000)
Maintenance Bays	$0	$5,704,000	$5,704,000	$0	($5,704,000)
Division 4	$48,500,000	$90,938,451	$139,438,451	$0	($90,938,451)
Charging Stations	$15,000,000	$66,852,721	$81,852,721	$0	($66,852,721)
Hydrogen Stations	$31,200,000	$20,877,230	$52,077,230	$0	($20,877,230)
Maintenance Bays	$2,300,000	$3,208,500	$5,508,500	$0	($3,208,500)
Division 6	$16,300,000	$75,437,700	$91,737,700	$0	($75,437,700)
Charging Stations	$0	$37,959,200	$37,959,200	$0	($37,959,200)
Hydrogen Stations	$14,000,000	$34,270,000	$48,270,000	$0	($34,270,000)
Maintenance Bays	$2,300,000	$3,208,500	$5,508,500	$0	($3,208,500)
CMF	$2,300,000	$14,406,679	$16,706,679	$0	($14,406,679)
Maintenance Bays	$2,300,000	$14,406,679	$16,706,679	$0	($14,406,679)
Supporting Projects	$21,240,000	$35,830,958	$57,070,958	$0	($35,830,958)
Non-Revenue Fleet Replacement	$0	$10,240,106	$10,240,106	$0	($10,240,106)
Non-Revenue Charging / Fueling Infrastructure	$0	$2,590,852	$2,590,852	$0	($2,590,852)
TEC Modernization-ZEBU	$21,240,000	$23,000,000	$44,240,000	$0	($23,000,000)
Program Total	**$416,640,000**	**$2,134,820,198**	**$2,551,460,198**	**$1,471,894,912**	**($662,925,286)**

DRAFT

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