

ALAMEDA-CONTRA COSTA TRANSIT DISTRICT



STAFF REPORT

MEETING DATE: 6/10/2020

Staff Report No. 20-224

TO: AC Transit Board of Directors
FROM: Michael A. Hursh, General Manager
SUBJECT: AC Transit Zero-Emissions Bus Rollout Plan

ACTION ITEM

RECOMMENDED ACTION(S):

Consider adopting Resolution 20-029 approving the AC Transit Zero-Emissions Bus (ZEB) Rollout Plan.

STRATEGIC IMPORTANCE:

Goal - Environmental Improvement
Initiative - Zero Emission Programs

AC Transit's Zero-Emissions Bus (ZEB) Rollout Plan provides a path to achieve the goal of transitioning the bus fleet to 100 percent zero-emissions by 2040. This plan directly supports the District's Environmental Improvement Goal along with the following Initiatives: Zero Emission Programs and Infrastructure Modernization, Employee Recruitment, Training & Retention, and Service Quality.

BUDGETARY/FISCAL IMPACT:

There are no budgetary or fiscal impacts directly related to this report. However, each phase of ZEB deployment will have associated costs that will be presented to the Board for review and approval.

The District intends to pursue funding opportunities vigorously; however, given the 2020 pandemic and uncertain future of transit financing and ridership, it is highly likely the implementation timeline, and fleet size will change. Staff will keep the Board of Directors, Funding Partners, and Regulatory Agencies apprised of this evolving situation.

BACKGROUND/RATIONALE:

The Innovative Clean Transit (ICT) regulation was adopted by the California Air Resources Board (CARB) in December of 2018 and became effective 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. It covers standard, articulated, over-the-road, double decker, and cutaway buses. The ICT regulation requires a percentage of new bus purchases to

be zero-emission buses (ZEBs). The ZEB percentage increases gradually with time. The ZEB purchase requirements begin in 2023 for large transit agencies, operating 200 buses or more, and 2026 for small transit agencies. Starting in 2029, all transit agencies can only purchase new ZEBs to replace end of useful life buses, with a goal of complete transition to ZEBs by 2040.

Each transit agency must adopt and submit to the California Air Resources Board (CARB) a Zero- Emissions Bus (ZEB) Rollout Plan describing how the agency will transition to a zero-emission fleet. A large transit agency must submit this plan to CARB by July 1, 2020. Accordingly, staff has prepared a draft ZEB Rollout Plan which outlines the District's goal of full transition to zero-emission technologies by 2040. A ZEB Rollout Plan must meet the following requirements:

- a) A goal of full transition to zero-emission buses by 2040 with careful planning that avoids early retirement of conventional internal combustion engine buses;
- b) Identification of the types of zero-emission bus technologies a transit agency is planning to deploy, such as battery electric or fuel cell electric bus;
- c) A schedule for construction of facilities and infrastructure modifications or upgrades, including charging, fueling, and maintenance facilities, to deploy and maintain zero-emission buses. This schedule must specify the general location of each facility, type of infrastructure, service capacity of infrastructure, and a timeline for construction;
- d) A schedule for zero-emission and conventional internal combustion engine buses purchases and lease options. This schedule for bus purchases must identify the bus types, fuel types, and number of buses;
- e) A schedule for conversion of conventional internal combustion engine buses to zero-emission buses, if any. This schedule for bus conversion must identify number of buses, bus types, the propulsion systems being removed and converted to;
- f) A description on how a transit agency plans to deploy zero-emission buses in disadvantaged communities as listed in the latest version of "CalEnviroScreen";
- g) A training plan and schedule for zero-emission bus operators and maintenance and repair staff;
- h) Identification of potential funding sources; and
- i) Start-up and Scale-up Challenges.

AC Transit's Board of Directors has approved the Strategic Plan, Clean Corridors Plan, Capital Improvement Program, Facilities Utilization Study, and Zero-Emissions Bus Study as the guiding documents to develop a ZEB Rollout Plan that complies with the ICT Regulation requirements.

Through more than 20-years of experience deploying ZEBs, AC Transit has learned there are still many unknowns and unexpected challenges to overcome. ZEB technologies are in a period of rapid development and change with both battery electric and fuel cell electric bus technologies having start-up and scale-up challenges as listed in Section I of the ZEB Rollout Plan. In order to successfully transition the fleet, AC Transit will need policy makers, industry original equipment manufacturers (OEMs) and energy providers to help address the existing challenges and risks.

To stay current with advances in ZEB technology, staff remains active with the American Public Transportation Association (APTA), California Transit Association (CTA) and several other national, regional and local ZEB related memberships. A ZEB Rollout Plan is not binding and can be updated by a transit agency. As technology advances and solutions to challenges are realized, staff will make necessary adjustments to the Plan and provide updates to the AC Transit Board of Directors.

It is important to note the District's ZEB Rollout Plan is a living document meant to guide the implementation of zero-emissions bus fleets and help the District work through many of the potential challenges to explore solutions. The Plan provides estimated timelines based on best available information for bus purchases, infrastructure upgrades, workforce training, or any other timelines in the Plan. AC Transit may update the Plan as needed with the most current information and industry best practices.

Staff recommends adoption of Resolution 20-029 approving the AC Transit Zero-Emissions Bus (ZEB) Rollout Plan.

ADVANTAGES/DISADVANTAGES:

The advantage of adopting a Zero-Emissions Bus Rollout Plan is it will bring the District into compliance with the California Air Resources Board (CARB) Innovative Clean Transit Regulation (ICT).

There are no disadvantages to adopting the Plan.

ALTERNATIVES ANALYSIS:

Staff found no practical alternatives to the course of action recommended in this report.

PRIOR RELEVANT BOARD ACTION/POLICIES:

Staff Report 20-017: Adoption of the AC Transit Clean Corridors Plan 2020, which updates the original Clean Corridors Plan, to coordinate the rollout of zero-emission buses to equity goals while considering vehicle range.

Staff Report 19-152: Annual update on compliance with California Air Resources Board (CARB) regulations.

Staff Report 19-054: Report on the District's study on Zero Emissions Bus (ZEB) expansion.

ATTACHMENTS:

1. Resolution 20-029
2. AC Transit Zero-Emission Bus Rollout Plan

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