

El Dorado County Zero-Emission Bus (ZEB) Fleet Conversion Plan - Stakeholder Advisory Committee Meeting #2

Introduction

On Wednesday, September 29, 2021, from 11:30 am to 1:00 pm El Dorado County Transportation Commission (EDCTC) and El Dorado Transit hosted the second Stakeholder Advisory Committee meeting for the El Dorado County Zero-Emission Bus (ZEB) Fleet Conversion Plan. Below is a list of project team members that were in attendance:

EDCTC:

- Dan Bolster
- El Dorado Transit:
- Matt Mauk
- Brian James
- Stantec:
- David Verbich
- Amanda McDaniel
- Analy Castillo
- Sasha Pejicic
- AIM Consulting:
- Gladys Cornell
- Hannah Tschudin

The SAC meeting was attended by five representatives from the following organizations or agencies:

- El Dorado County Board of Supervisor
- El Dorado Hills CSD
- PG&E
- 50 Corridor Transportation Management Association

About the Project

In 2018, the California Air Resources Board (CARB) adopted the Innovative Clean Transit (ICT) Regulation which mandates that all public transit bus fleets convert to zero-emission buses by 2040. As part of this mandate, small transit operators must submit a Zero-Emission Bus (ZEB) Rollout Plan to CARB by July 2023.

El Dorado Transit assumes that transitioning to a 100% ZEB fleet will affect every aspect of its operations including: management, changes to operational practices, operations and maintenance facility upgrades and/or new construction, adapting to new and changing technology, scheduling and dispatching bus routes, fleet maintenance, fleet size and type of ZEB's to procure, funding ZEB procurement, staffing and training personnel, charging/fueling costs and infrastructure, and regulatory compliance. The project will provide El Dorado Transit with the tools it needs to address these and other issues and successfully transition to a ZEB fleet by 2040 and submit a ZEB Rollout Plan by July 1, 2023.

Methodology

The Stakeholder Advisory Committee meeting was held online through Zoom. To open the meeting, Gladys Cornell with AIM Consulting welcomed attendees and provided a short orientation on Zoom with instructions on how to participate. After, she introduced the project team and asked the participants to introduce themselves and their interest in the project.

Dan Bolster, EDCTC Senior Transportation Planner & Project Manager, then provided project background information including the California Air Resource Board requirements and gave a brief overview of the outreach and engagement efforts.

David Verbich, Project Manager with Stantec gave an overview of the draft Zero-Emission Bus (ZEB) Fleet Conversion Plan. The meeting was concluded with an open discussion between the project team and participating stakeholders.

Overview of Draft Zero-Emission Bus Fleet Conversion Plan

Together, EDCTC and El Dorado Transit are teaming up to transition to all zero-emission buses by 2040. Because this process requires analysis and planning to ensure that bus operations and passengers are not significantly impacted, El Dorado Transit will begin rolling out these buses in 2026. In order to make the transition to a zero-emission fleet, the project team assessed El Dorado Transit's current fleet.

Today, El Dorado Transit uses four different types of vehicles and runs three different types of services. There are 12 standard buses, which are 35 feet long and service local routes, 16 motor coaches, which are 45 feet long and service commuter routes, 13 cutaway buses which serve demand-response services and non-emergency medical transportation, and 10 Dial-A-Ride paratransit vehicles. All these vehicles are currently powered by gasoline or diesel fuel.

As El Dorado Transit plans to transition more than fifty vehicles to zero emission, there are a several considerations. Technology is still advancing, and currently, there are limited zero-emission equivalents for several of El Dorado Transit's fleet and for its specific needs. Additionally, El Dorado Transit may be unable to replace current fossil fuel vehicles with zero-emission vehicles in a 1-to-1 manner because currently, those vehicles have operating range limitations that exceed how El Dorado Transit currently schedules and runs its vehicles. El Dorado Transit will need to creatively re-schedule how vehicles are operated and will likely need a few more vehicles to maintain service levels.

To maintain current services with new zero emission technology, buses will need to charge intermittently throughout the day and one standard bus and motor coach bus will need to be added to the fleet to ensure that there are enough buses available to maintain service.

However, for vans and cutaway buses, the type of technology needed to meet anticipated levels of service isn't currently available. For example, only 120 kWh batteries are available today on cutaway style vehicles, but a >230-kWh battery is needed to carry out the vehicle's services. Because of this, El Dorado Transit may need to apply for an exemption to continue van and cutaway bus services with diesel and gas vehicles while waiting for zero-emission technologies to catch up to its needs.

The rollout plan will start in 2025, beginning with underground conduit work in area A of El Dorado Transit's bus depot. During this work, 5 energy dispensers will be installed. By 2026 El Dorado Transit will start operation of the first Battery Electric Bus and 3 years later in 2029, underground conduit work will

continue in Area B of the bus depot with the installation of an additional 24 energy dispensers. By 2040, all El Dorado Transit's service vehicles will use zero emission technology.

To pay for these upgrades, EDCTC and El Dorado Transit will be applying to grants from Federal, State, and local programs as well as from agencies like PG&E. Although the fleet transition will be costly upfront, there are many long-term benefits including: An 80% reduction of greenhouse gas emissions, cleaner air and better public health, easier and cheaper bus maintenance due to fewer moving parts, lower fuel costs from using electricity rather than fossil fuels, and an improved rider and driver experience, including a smoother and quieter ride.

Discussion

After the presentation the project team opened the discussion portion of the meeting. A representative from PG&E let the project team know that small transit agencies in rural areas were successful acquiring battery-electric cutaway buses and mentioned other funding sources that the project team could apply for. Another participant mentioned that the team should investigate installing solar panels above where the bus fleet is stored. They mentioned that not only do solar panels create energy, but they also protect the buses from weather damage thus reducing bus maintenance even further.