



Staff Report

File #: 23-0110

REQUEST FOR CITY COUNCIL ACTION

DATE: 02/15/2023

TO: Honorable Mayor and City Council Members

FROM: Community Services Department

SUBJECT:
Zero-Emission Bus Rollout and Implementation Plan.

EXECUTIVE SUMMARY:

This staff presentation is an informational update on the California Air Resources Board statewide mandate to analyze transit agency operations for the selection of zero emission bus fuel technology. All transit agencies are required to develop and submit a Zero-Emission Bus Rollout and Implementation Plan by July 1, 2023. City staff is working with the Riverside County Transportation Commission in the development of the Riverside County Zero-Emission Bus Rollout and Implementation Plan.

RECOMMENDED ACTION:

That the City Council receive the information for discussion and set a future meeting date of March 15, 2023, for the potential final discussion and selection of a zero-emission bus fuel technology for Riverside County Transportation Commission to incorporate the City's selection in its rollout and implementation plan.

BACKGROUND & HISTORY:

The California Air Resources Board (CARB) instituted the Innovative Clean Transit (ICT) regulation in December 2018. Per the regulation, all public transit agencies are required to gradually transition to a 100-percent zero-emission fleet by 2040. This goal is to be achieved through the purchase of new zero-emission buses in accordance with the purchasing rules, shown in the table below. Beginning in 2026 through 2028, 25% of bus purchases each year (if any) must be equipped with zero-emission technology. Starting in 2029 and thereafter, one-hundred (100) percent of fleet purchases must be zero-emission. For example, in compliance with Federal Transportation Agency bus replacement regulations, Corona is required to purchase seven (7) buses in 2028, based on its current procurement schedule. Of the seven buses, only two (2) will need to comply with the mandate at

that time.

Starting January 1	ZEB Percentage of Total New Bus Purchases
2026	25%
2027	25%
2028	25%
2029	100%

Because this is an unfunded mandate, the goal of these plans is for CARB to assess the financial impacts of the mandate on each agency and to plan for future financial assistance opportunities to aid all agencies meet the mandate by 2040.

CARB requires the submission of the zero-emission bus rollout and implementation plans for small public transit agencies by July 1, 2023. The smaller transit agencies in the Riverside County area approached Riverside County Transportation Commission (RCTC) for assistance with the development of the Zero-Emission Bus (ZEB) Rollout and Implementation Plans to meet the ICT regulation. The smaller transit agencies include the cities of Corona, Banning, Beaumont, Riverside, and Palo Verde Valley Transit Agency.

RCTC agreed to assist and applied for grant funding from the California Department of Transportation (Caltrans) FY 2021-2022 Sustainable Transportation Planning Grant program under the Sustainable Communities Competitive-Technical category. In June 2021, RCTC secured a Caltrans grant in the amount of \$271,380 to match the \$202,420 in State Transportation Improvement Program Planning, Programming, and Monitoring funds.

On April 13, 2022, RCTC awarded a contract to the Center for Transportation and the Environment (CTE), a 501c-3 nonprofit engineering and planning firm, to develop the Riverside County Zero-Emission Bus Rollout and Implementation Plans (ZEB Plans) for the five smaller transit agencies. Following the award of the contract, RCTC and CTE, initiated the kickoff meeting with Corona on June 16, 2022, to discuss the key activities and schedule the development of the ZEB Plans.

ANALYSIS:

Under CARB's ICT regulations, the approved zero-emission fuel technology solutions include battery electric and hydrogen fuel cell. The plan must include several analyzed components to reach the goal of a complete fleet transition to zero-emission buses by 2040. Key components analyzed in the development and preparation of these reports include:

- Review of the existing conditions.
 - Relevant demographics
 - Service area characteristics
 - Existing fleet sizes and conditions

- Preparation of reports based on the findings and conclusions and preferred zero-emission technology option(s).
- Development of a detailed capital and operating financial analysis comparing the purchase of ZEB's to the purchase of existing CNG buses and a long-term implementation strategy report.

Capital Analysis components include:

- Purchasing & procurement schedule with efforts to avoid early retirement of conventional CNG buses.
- A schedule and location for ZEB facilities and infrastructure.
- Training plan and schedule for ZEB operators, maintenance, and repair staff.

Financial Analysis components include:

- Fleet costs
 - Fuel costs
 - Maintenance costs
 - Preliminary infrastructure projects & costs
 - Total cost of Ownership
 - Identification of potential funding sources.
- Benefits and drawback of each technology, i.e., battery elect and hydrogen cell fuel.

Corona Existing Conditions and Financial Report Summary

CTE was informed that the City is undergoing a Comprehensive Operations Analysis and looking to overhaul routes and service. Due to the mandate criteria, this analysis was required to study the City's conditions under existing service routes. This type of analysis will need to be revisited after the City transitions to its new transit services and routes.

Below is a summary of findings based on CTE's analysis specific to Corona's existing transit services and conditions, i.e., existing Blue and Redline routes, relevant demographics, service area characteristics, existing fleet sizes and conditions, location and status of charging and maintenance infrastructure and financial impacts of each.

Battery Electric Buses (BEBs)

- Fueling time longer than CNG (internal combustion engine (ICE) bus.
- Fuel cost highly variable could be higher or lower than fossil fuels.
- BEB bus cost approximately 50% higher than ICE bus.
- Infrastructure costs increases per bus when scaled up.
- No additional land needed for infrastructure (per staff assessment)

Fuel Cell Electric Buses (FCEB) (aka hydrogen fuel)

- Comparable range to ICE bus - 1:1 replacement ratio.
- Fueling time comparable to ICE bus.
- Fuel cost significantly higher than fossil fuel.
- Bus cost significantly higher than ICE bus.
- High infrastructure costs but reduce per bus when scaled up.

- Greater resilience.
- Land acquisition unknown (not analyzed by CTE as part of this report).

A full copy of the existing condition analysis and financial analysis reports is attached to this staff report.

Schedule and Timing

To meet the ICT submission deadline, the following timeline has been scheduled to develop and submit the Corona Transit ZEB Plan:

Tasks	Task Due	Status
#1 Development of Existing Conditions Report	October 2022	Completed
#2 Presentation to City Council to introduce matter, report on existing conditions and technologies available	February 2023	In Progress
#3 Council selection of zero-emission bus technology	March 2023	On track for council approval on March 15, 2023
#4 Council approval of the ZEB Plans based on bus technology approved by City Council on 3/15/23	June 2023	On track for council approval on June 7, 2023
#5 RCTC submittal of Zero-Emission Bus Rollout and Implementation Plan to CARB	July 2023	On track to submit July 1, 2023

Although the deadline is nearing, staff believes it is necessary to provide this informational presentation first to provide Council time to process and study the information prior to making a selection. Therefore, as outlined above, staff will return to Council in 30 days to answer questions, provide a recommendation, and to seek direction (selection) on the preferred zero-emission technology.

FINANCIAL IMPACT:

This project requires staff time to coordinate the various activities in developing the ZEB Plan. Furthermore, the implementation to zero-emission buses and equipment will be submitted through the annual Short-Range Transit Plans.

There is no fiscal impact at this time. For future transit fleet purchases, federal revenues pay a majority share of the cost, and the state pays the difference. No City General Funds are expended for transit fleet purchases.

ENVIRONMENTAL ANALYSIS:

This action is exempt pursuant to Section 15061(b)(3) of the Guidelines for the California Environmental Quality Act (CEQA), which states that a project is exempt from CEQA if the activity is

covered by the commonsense exemption that CEQA applies only to projects that have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. This action awards a contract for consulting services to analyze the City's transit services. The selection of a consultant is not considered a project under the California Environmental Quality Act. There is no possibility that this action will have a significant effect on the environment. Therefore, no environmental analysis is required.

PREPARED BY: SUDESH PAUL, TRANSIT PROGRAM MANAGER & CYNTHIA LARA, COMMUNITY ASSISTANCE MANAGER

REVIEWED BY: ANNE K. TURNER, COMMUNITY SERVICES DIRECTOR

Attachments:

1. Exhibit 1 - City of Corona Transit Service Existing Conditions Report
2. Exhibit 2 - City of Corona Zero-Emission Transition Financial Analysis