



City of Arts & Innovation

City Council Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL **DATE: JUNE 20, 2023**

FROM: PARKS, RECREATION AND COMMUNITY SERVICES DEPARTMENT **WARDS: ALL**

SUBJECT: FUEL SOURCE TECHNOLOGY FOR CITY OF RIVERSIDE CONNECT ON ZERO-EMISSION BUS ROLLOUT PLAN

ISSUES:

Pursuant to State's California Air Resources Board (CARB) Innovative Clean Transit (ICT) regulation, all small transit agencies are required to develop and submit a Zero-Emission Bus Rollout Plan by June 30, 2023. City staff is participating with Riverside County Transportation Commission in the development of the Zero-Emission Bus Rollout Plans for small transit operators in the county. The plan must be developed based on the approved zero emission bus fuel technology. As such, staff is recommending a mixed-fleet fuel technology for the City's transit fleet.

RECOMMENDATIONS:

That the City Council:

1. Approve the mixed-fleet transition scenario as the recommended zero-emission transition strategy for the development of the City of Riverside Connect Zero-Emission Bus Rollout Plan;
2. Approve the ICT Zero-Emission Bus Rollout Plan for submission to CARB by June 30, 2023; and
3. Adopt a Resolution of the City of Riverside authorizing the submission of the Zero-Emission Bus Rollout Plan to the California Air Resources Board as required by the Innovative Clean Transit (ICT) regulation.

BACKGROUND:

The California Air Resources Board (CARB) adopted the Innovative Clean Transit (ICT) regulation in December 2018. Per the regulation, all California public transit agencies are required to gradually transition to a 100-percent zero-emission fleet by 2040. Riverside Transportation has developed a plan to transition to a fully zero emission vehicle (ZEV) fleet composed of battery electric, and fuel cell electric cutaways in accordance with the ICT regulation.

This goal is to be achieved through the purchase of new zero-emission buses (ZEB) 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 comply with zero-emission technology. And starting in 2029 and thereafter, 100% of fleet purchases must be zero-emission. For example, in compliance with the Federal Transit Administration bus replacement regulations, the City of Riverside is required to purchase 10 buses in 2026, of the 10, only 3 will need to comply with the regulation.

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

The completion of the ZEB rollout plans will allow CARB to assess the financial impacts of the regulation on transit agencies and plan for future funding assistance opportunities to aid all agencies to reach the goal by 2040.

CARB requires the submission of the ZEB rollout plans for small public transit agencies by June 30, 2023. The smaller transit agencies in the Riverside County area approached the Riverside County Transportation Commission (RCTC) for assistance in the development of the ZEB Rollout 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 ZEB Rollout Plans for the five smaller transit agencies. In addition to each transit agency's ZEB Plan, RCTC will also be preparing a countywide ZEB Financial Strategy to assist the transit operators with implementation. Following the award of the contract, RCTC and CTE, initiated the kickoff meeting with City of Riverside on June 16, 2022, to discuss the key activities and schedule the development of the ZEB Plans.

Under CARB's ICT regulations, the approved zero-emission fuel technology solutions include battery electric, and hydrogen fuel cell. To accomplish the full ICT rollout plan, CTE's scope of work included the following:

- 1) Development of an existing conditions report (Attachment 2). This gathered and provided the following information:
 - Relevant demographics
 - Service area characteristics
 - Existing fleet sizes and conditions

- 2) Development of a detailed capital and operating financial analysis comparing the purchase of ZEB's to the purchase of existing CNG buses over the transition period to 2040, including a longer-term capital strategy report. Attachment 3 to the staff report provides the financial analysis.
 - Financial Analysis components include:
 - Fleet procurements and costs
 - Fuel costs
 - Maintenance costs
 - Preliminary infrastructure projects & costs
 - Total cost of Ownership
 - Capital analysis of the longer-range strategy report will 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.
 - Emissions report
 - Identification of potential funding sources
 - Benefits and drawbacks of each technology
- 3) Development of the ICT Zero-Emission Bus Rollout plan for the City of Riverside, which is attachment 4 to the staff report.
- 4) Provide technical assistance to agency staff at the City's Council meeting.

DISCUSSION:

Based on the results of the financial analysis and working with the City's fleet division and Riverside Public Utilities, staff recommends pursuing a mixed-fleet fuel source option to include both technologies. A mixed fleet option will provide greater redundancy and resilience benefits and less reliance on just one source of fuel supply during grid-down or fuel supply shortage scenarios. This option provides the most flexibility in determining the City's preferred fueling technology for its Transit fleet and other City departments technology selection.

Based on purchasing regulations, 25% of the buses purchased in 2026 must be zero-emission. Therefore, the city can pursue the first bus purchase requirement of three buses with the more familiar widely used technology of battery electric while continuing to explore the FCEB technology and allowing it to continue to mature and develop.

Staff is also recommending that the attached ICT Zero-Emission Rollout Plan be approved to put forth the mixed-fleet option to CARB. After meeting internally with other departments, RCTC and CTE, staff requested CTE to prepare the attached ICT Zero-Emission Rollout Plan for submission to CARB. The ZEB plans are a living document that are meant to be revisited as the market matures, therefore, the City can at any time, reassess to determine the technology that best meets both ICT and the City's requirements. In addition, CARB requires that agencies approve, by resolution, the ICT Zero-Emission Bus Rollout Plans. This is also recommended to be approved by Council and is attached to the staff report.

Lastly, after staff submits the required ICT Zero-Emission Bus Rollout Plan and adopted resolution, RCTC will be preparing a financial strategy presented to its board in October 2023. This will combine all of the transit operator's financial analysis, which will be updated as agencies are implementing the preferred zero-emission technology and provide a countywide funding picture.

STRATEGIC PLAN ALIGNMENT:

The zero emissions plan contributes to **Strategic Priority 4 – Environmental** and **Goal 4.6** by implementing the requisite measures to achieve citywide carbon neutrality no later than 2040. It also supports **Strategic Priority 6 – Infrastructure, Mobility & Connectivity** and **Goal 6.1** in addressing the transportation needs of the Senior and Disabled residents of Riverside.

This action aligns with each of the five Cross-Cutting Threads as follows:

1. **Community Trust** – Riverside CONNECT ensures equitable access to sustainable modes of transportation connecting senior citizens (60 years of age and older) and persons with disabilities to opportunities such as employment, education, healthcare, and community amenities.
2. **Equity** – The Riverside CONNECT transition to a fully zero emission fleet will benefit communities through cleaner air, greater independence from fossil fuels, and more environmental sustainability.
3. **Fiscal Responsibility** – Riverside CONNECT will be able to apply for additional funding for zero-emission vehicles through specific funding opportunities.
4. **Innovation** – Being proactive and providing equitable climate solutions based in science to ensure clean air and a resilient green economy for current and future generations.
5. **Sustainability & Resiliency** – The ZEB plan will maintain, protect, and improve assets and infrastructure within the City's built environment to ensure and enhance reliability, resiliency, sustainability, and facilitate connectivity.

FISCAL IMPACT:

There is no fiscal impact resulting from accepting this report. A funding plan for implementation to zero-emission buses and equipment will be developed and included in future budgets through the annual Short-Range Transit Plans. As this is a partially funded regulation, the City of Riverside would need to pursue competitive federal and state grants as well as having a consultant on board to assist with the Zero Emissions project, including applying for grants.

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Certified as to	
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Approved by:	Kris Martinez, Assistant City Manager
Approved as to form:	Phaedra A. Norton, City Attorney

Attachments:

1. Presentation
2. Existing Conditions Report
3. Financial Analysis
4. City of Riverside's ICT Zero-Emission Bus Rollout Plan
5. ICT required Resolution