

STAFF REPORT

SUBJECT: Zero Emissions Bus Transition Update

FROM: Christy Wegener, Executive Director

DATE: November 27, 2023

Action Requested

This is an informational update.

Background

On December 14, 2018, the California Air Resources Board (CARB) finalized its Innovative Clean Transit (ICT) regulation in support of the State’s efforts to meet its health-based air quality standards, address community needs, and fight climate change. The rule requires California public transit agencies to transition to zero-emission bus (ZEB) fleets by 2040, in part by mandating the percentage of new bus procurements that must be ZEBs for each year of the transition period (2023–2040). For small transit agencies:

- Starting January 1, 2026, 25% of all new bus purchases must be zero-emission
- Starting January 1, 2029, 100% of all new bus purchases must be zero-emission
- Starting March 2021 through March 2050, annual compliance reports are due to CARB

The ICT regulation required each transit agency to submit a Board-approved ZEB Rollout Plan before ZEB purchase requirements take effect, to ensure “a successful and orderly transition to a ZEB fleet by 2040.” The Rollout Plan provides estimated timelines and costs for bus purchases, infrastructure upgrades, workforce training, and other developments, representing a financially unconstrained assessment of both rolling stock and infrastructure needs.

The Board approved LAVTA’s ICT Rollout Plan in April 2022, which identified hydrogen fuel-cell electric buses (FCEBs) as the preferred ZEB technology due to a variety of cost and other factors, and outlined a plan to replace 100% of the Agency’s diesel hybrid buses with FCEBs beginning in 2025, well in advance and in excess of the ICT deadline and regulatory minimums. The ICT Plan identified a capital funding shortfall of \$61.8 million for both fleet and fueling needs relative to a baseline scenario for continued purchase and operation of hybrid buses, indicating a substantial need to seek additional outside funding to support the transition.

In June 2022, LAVTA’s Board adopted the FY2022 – FY2027 Short Range Transit Plan (SRTP), which the Metropolitan Transportation Commission (MTC) requires Bay Area transit agencies to prepare in order to align operating and capital needs for future programming of the region’s various transit funding sources, especially federal formula funds MTC programs to maintain the region’s transit systems in a state of good repair. The 2022 SRTP included a 10-year Capital Improvement Program (CIP) for FY2022 – FY2031, including a fleet replacement

schedule calling for new bus purchases as vehicles in LAVTA’s current fleet reach the end of their useful life as follows:

Year	Fleet Size	# of Replacement Buses	% of Fleet	# Hybrid	# FCEB	Procurement Status
FY2022	60	16	27%	16	0	Completed
FY2023	68	12	18%	8	4	In Process
FY2028	68	20	29%	0	20	Future
FY2029	68	20	29%	0	20	Future

In October 2022, based on infrastructure needs identified in the ICT Rollout Plan, the State of California awarded LAVTA \$6.6 million in federal discretionary grant funds to construct a hydrogen fueling station at LAVTA’s Atlantis facility, which is expected to be completed by the end of 2025. Nevertheless, nearly \$54 million in incremental costs of purchasing FCEBs to support the full transition from diesel-electric hybrids have yet to be identified.

Discussion

Staff are now preparing for the agency’s next 12-bus procurement by updating cost estimates based on recent purchases by other agencies and analyzing available funding sources. Currently, the programming available to LAVTA in MTC’s Transit Capital Priorities Program (TCP), which programs the region’s federal formula funds for replacement bus purchases, assumes a mixed composition of 4 FCEBs and 8 diesel-electric hybrids in accordance with LAVTA’s CIP. LAVTA’s ability to request additional federal formula funding for 12 FCEBs is hampered by shortfalls in the regional bus capital program relative to needs of the region’s bus operators, mainly due to significant price increases faced by all transit agencies in the current bus market across all types of technologies.

In light of the limitations of oversubscribed federal formula funds currently available, other transit agencies report adjusting their bus procurement plans by reducing the quantity of buses purchased (especially for agencies whose services are still substantially below pre-pandemic levels), deferring purchases to extend the life of existing vehicles, and/or buying less expensive diesel-based buses instead of costlier alternatives to maintain full fleet capacity near-term.

Consistent with federal law, MTC provides a maximum of 80% of the cost of replacement buses using federal funds, but in recent years LAVTA has been covering a greater share of the price of diesel-hybrid buses using its local match funds, as the costs of buses as delivered has exceeded amounts authorized by MTC, which sets price maximums using a regional bus/van price list. With a mixed fleet replacement currently programmed in the TCP, LAVTA is expecting to receive \$10,041,600 in federal funding (80%) and provide \$2,510,400 in Transportation Development Act (TDA) funding to cover the minimum local match (20%).

If LAVTA elects to purchase 12 FCEB buses in FY25 instead of 4, based on current programming and pricing assumptions in the TCP, an additional \$3,192,000 would be required at minimum from TDA reserves to cover the cost difference, but the actual amount could be greater. Additionally, given the cost of hydrogen is currently approximately 5 times the cost of diesel, staff would expect to see a significant increase in operating costs with moving 18% of the fleet to hydrogen beginning in FY26. Staff continues to anticipate operating costs for FCEBs will

decline in future years as major public investments in hydrogen infrastructure meant to drive down costs are built out, but near-term costs remain high compared to existing technologies. LAVTA's TDA funds also cover the bulk of the agency's operating expenses.

Concurrent with the procurement planning and budgeting activities currently under way, staff anticipates federal and state discretionary funding opportunities will be announced soon that, if LAVTA is successful in securing these funds to cover the incremental costs associated with purchasing 8 additional FCEBs, would enable LAVTA to accelerate the adoption of FCEB technology from 4 to 12 buses in 2025 and also build out the facilities needed to support the next phase of transition to ZEBs in 2028/2029. However, if unsuccessful in securing competitive funds, LAVTA would be responsible for covering the incremental costs with its own resources.

Next Steps

After receiving Committee input, staff will finalize the procurement plans and budget, including applying for discretionary funding as available to support a more accelerated transition to FCEBs, and return in early FY25 to seek authorization for the 12-bus purchase.

Fiscal Impact

There is no fiscal impact associated with this informational update.

Recommendation

Staff recommend the Projects and Services Committee hear the item and provide feedback to staff.