



## Staff Report Details (With Text)

**File #:** 21-1017      **Version:** 1      **Name:** CityBus Fleet Electrification Master Plan Update  
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**File created:** 5/18/2021      **In control:** Standing Mobility Subcommittee  
**On agenda:** 5/25/2021      **Final action:**  
**Title:** (1) Receive Presentation Regarding CityBus Fleet Electrification Master Plan Update, and (2) Provide Direction to Staff.  
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Date	Ver.	Action By	Action	Result
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### (1) Receive Presentation Regarding CityBus Fleet Electrification Master Plan Update, and (2) Provide Direction to Staff.

**Meeting Date:** May 25, 2021  
**Contact Person:** Mike Tobin, Deputy Transportation Officer /Transportation  
**Phone:** (310) 253-6500  
**Action Item:** Yes [ ] No [X]      **Attachments:** Yes [X] No [ ]  
**Fiscal Impact:** Yes [ ] No [X]      **General Fund:** Yes [ ] No [X]  
**Public Notification:** (E-Mail via GovDelivery) Meetings and Agendas - Mobility, Traffic & Parking Subcommittee; Notify Me - Construction, Street Maintenance and Closures; Stay Informed - Bicycle & Pedestrian / Culver CityBus / Construction, Street Maintenance and Closures (05/24/21)  
**Department Approval:** Rolando Cruz, Chief Transportation Officer (05/18/2021)

### BACKGROUND/DISCUSSION

With guidance and direction from the City Council, the Culver City Transportation Department will transition Culver City's entire bus fleet to a 100% zero emission fleet by 2028, well in advance of California Air Resources Board's (CARB's) Innovative Clean Transit (ICT) 2040 goal and zero emission bus (ZEB) purchasing mandates. To meet this goal, Culver City has established a multi-phased project to develop a ZEB transition plan, design and build charging infrastructure, and replace their current CNG fleet with battery electric buses (BEB) starting in 2021 and achieving a

100% zero emission fleet by 2028.

Moving forward, the City will replace its fleet of transit buses with zero emission vehicles on a one-for-one basis as they reach the end of their useful life. Culver City has moved forward in leveraging California's statewide DGS contract and executed a purchase order with New Flyer of America for the purchase of ten (10) battery electric buses and associated charging infrastructure.

On July 13, 2020, City Council approved an Agreement with New Flyer of America, Inc. for the Purchase of Four (4) Battery Electric Buses and Associated Equipment in an Amount Not-to-Exceed \$4,426,800.

On May 24, 2021, Staff has made a recommendation to Council to Approve a Purchase Order with New Flyer of America, Inc. in an Amount Not-to Exceed \$6,580,070 (\$5,981,882 base plus \$598,188 contingency) to Supply Six (6) Battery Electric Buses.

The first four buses are scheduled to be delivered in August / September 2021, with an in-service target date within 30 days. A temporary ABB plug-in pedestal charger has also been procured and will be installed and commissioned no later than August 1<sup>st</sup> of 2021.

Understanding the need to create a ZEB transition plan, staff received authorization from Council on September 14th, 2020 to enter into a Professional Services Agreement with CTE; the Center for Transportation and Environment. The agreement is for Architectural and Engineering Services and the development of a long-term plan for the Transportation Department's BEB and Facility Electrification initiative. CTE is a nationally recognized non-profit organization that develops, promotes, and implements advanced transportation technologies, vehicles, and fuels that reduce environmental pollution and fossil fuel dependency. CTE's project portfolio includes 61 projects with 41 transit properties throughout the country.

The final report from this project with CTE will satisfy the CARB ICT requirements (Cal. Code Regs. Tit. 13 § 2023.1(d)) requiring each transit agency to submit a complete Zero-Emission Bus Rollout Plan (Rollout Plan), approved by its governing body, showing how it plans to achieve a full transition to zero-emission buses (ZEBs).

Culver City Transportation staff have been working diligently with CTE and its subconsultants on conducting the various analyses that will comprise the final Electrification Master Plan. This study uses CTE's ZEB Transition Planning Methodology, which is a complete set of analyses used to inform agencies converting their fleets to zero-emission technology. The methodology consists of data collection and analysis and assessment stages; these stages are sequential and build upon findings in previous steps. The work steps specific to this study are outlined below:

1. Planning and Initiation
2. Requirements & Data Collection
3. Service Assessment
4. Fleet Assessment
5. Fuel Assessment
6. Facilities Assessment
7. Maintenance Assessment
8. Total Cost of Ownership Assessment

Staff is working through each one of these steps and is drafting a report that summarizes the findings and final recommendations for a long-term facility infrastructure strategy that will include a roadmap for the next 7 years. At the March 30, 2021 Mobility subcommittee, direction was given to breakdown the report in several section and provide an update every other month to receive input from the community and the subcommittee.

Staff has completed steps 3 & 4 and will present the findings that specifically focus on the two following analyses:

- **Operational Review/Service Assessment** - This task includes using real-world efficiency data to estimate the performance of the New Flyer Battery Electric Bus on current Culver City routes and vehicle blocks. Specifically, this study evaluated the capability of current 40' BEBs to perform meaningful service in CCB operations as currently scheduled, based on the operational range and capacity of the 439 kWh battery configuration used in these vehicles, while taking into account certain requirements/constraints, including route specific characteristics, ridership, battery degradation, weather conditions, etc. The results of this task will provide estimated fuel efficiency, range, and daily energy requirements under various loading and battery degradation scenarios.
- **Fleet Assessment** - Using the results of the aforementioned Service assessment as well as a current fleet inventory, bus procurement, and bus disposal schedule, CTE has developed a comprehensive vehicle replacement schedule which details year on year costs of replacing CNG buses with Battery Electric Buses on a 1:1 basis. The capital costs associated with the replacement schedule will then be used to calculate the Total Cost of Ownership of the project.

Each of these analyses are inputs to the Department's final Master Electrification Plan, which is the primary output of this project. This plan will serve as a living document that guides the agency's decision making regarding every facet of electrification including but not limited to procurement, training, performance evaluation, data collection, facilities and infrastructure. Staff are currently completing the remaining steps and is planning on bringing an update to the mobility subcommittee in July (steps 5 & 6) and September (steps 7 & 8). Staff are expected to bring the final version of this plan to City Council for approval in October 2021.

## **FISCAL ANALYSIS**

None

## **ATTACHMENTS**

2021-05-24-ATT-Culver\_City\_Fleet\_Electrification\_Master\_Plan\_Draft

## **RECOMMENDED MOTION**

That the Mobility, Traffic and Parking Subcommittee:

1. Receive and file a Presentation on the Transportation Fleet Electrification Master Plan Update;  
and
2. Provide direction to Staff.