


CITY OF LOS ANGELES
INTER-DEPARTMENTAL MEMORANDUM

Date: June 16, 2022

To: Honorable City Council
c/o City Clerk, Room 395
Attention: Honorable Nithya Raman, Chair, Information, Technology, and General Services Committee

From: Seleta J. Reynolds, General Manager 
Department of Transportation

Subject: **Zero-Emission First Procurement Policy / Original Equipment Manufacturers / Light-Duty Vehicles / L.A. Green New Deal**

SUMMARY

As directed by the City Council (Council) in Council File 21-0680, this report details the Los Angeles Department of Transportation’s (LADOT) progress toward meeting the bus-electrification targets previously established by Council, including challenges faced and next steps.

RECOMMENDATION

That the City Council, subject to approval by the Mayor, RECEIVE and FILE this report.

BACKGROUND

LADOT’s vehicle fleet currently consists of 406 vehicles total, including an average of 326 vehicles in daily service with 80 vehicles acting as spares. LADOT allocates 346 heavy-duty buses to DASH and Commuter Express Programs and 60 Cutaway vehicles to the Cityride and LAnow Programs. Currently, the Fleet consists of 297 Compressed Natural Gas (CNG) buses, 49 Propane buses, 30 Electric Buses, and 30 gasoline buses.

Table 1: LADOT Existing Vehicle Fleet (2022)

Service	Length	Fuel Type	Total Buses
Commuter	40ft	CNG	98
Commuter	45ft	CNG	20
DASH	30 & 35ft	Electric	26
DASH	35ft	Electric	4
DASH	30 & 35ft	CNG	149
DASH	32ft	Propane	49
CityRide	24ft	CNG	30
CityRide	24ft	Gasoline	30

Total Fleet	406
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LADOT is electrifying its fleet in response to the June 2017 Council directive to transition to an all-electric fleet by 2030 ([CF 17-0739](#)), to meet sustainability goals set under the Mayor’s Executive Directive No. 25, adopting the goals of the 2019 Green New Deal for Los Angeles and directing that LADOT transition the City’s bus fleet to 100 percent zero-emission in time for the Olympic and Paralympic Games in 2028. To fully electrify its fleet by 2028, LADOT will procure only battery electric buses moving forward.

In June 2021, Council directed LADOT and other Departments to report on plans and progress towards meeting the City’s fleet electrification goals.

DISCUSSION

Existing Electric Fleet

LADOT Transit’s fleet currently includes 30 electric buses. These buses are stored at the Washington and Commercial St. yards and currently operate on DASH routes. In 2021, LADOT received its first electric Commuter Express coach bus, which will operate out of the Compton bus yard.

LADOT currently owns 13 sequential DC 150kW chargers (of which it operates 11) at the Downtown bus yard, which provides charging for the 25 Proterra buses and one BYD Commuter Express bus. The Washington bus yard houses four AC 80kW chargers, to charge 5 BYD buses.

LADOT Transit Electrification Progress

LADOT first purchased four DASH battery electric buses (BEB) from BYD Motors Inc. (BYD) in 2017. In 2019, LADOT used the Federal Transit Agency (FTA) Low- or No-Emission grant to procure 25 DASH BEBs and 13 chargers from Proterra. LADOT’s largest BEB procurement to date is the order of 130 BYD DASH BEBs, which BYD is currently building with delivery expected to begin in Summer 2022. LADOT purchased the 130 BEBs through a mixture of Federal, State, and Local funding sources, with the majority of the funding coming from the State’s Transit and Intercity Rail Capital Program (TIRCP). LADOT currently operates four AC Chargers and 11 DC Chargers for electric buses at its Commercial St. and Washington bus yards.

BYD recently delivered the City’s first electric Commuter Express coach and, after final safety checks and additional safety accessories are installed, the vehicle will be placed into service. LADOT is applying for Low- or No-emission grant funds to procure 16 electric Commuter coaches from Motor Coach Industries, Inc. (MCI), and is in the early stages of procuring an additional 34 BYD DASH BEBs.

Table 2: Electric Vehicles Purchased by LADOT

Number Purchased	Make	Model	Dimensions	Charging Type	Passenger Capacity	Range
25	Proterra	E-2 35'	36' L x 102' W x 135' H	DC	40	180 mile
4	BYD	K9S 35'	35' L x 102' W x 134' H	AC	35	145 mile
30	BYD	K7M 30'	29.9' L x 102' W x 134' H	AC	27	135 mile
100	BYD	K7M 30'	29.9' L x 102' W x 134' H	DC	27	135 mile
1	BYD	C10M 45'	45' L x 102' W x 134' H	DC	57	185 mile

LADOT will receive 130 BYD K7M electric buses beginning in Summer 2022 until the end of this calendar year. Originally planned for 2020 and 2021, recent manufacturer and labor delays due to the pandemic and the infrastructure implementation delays have significantly pushed back the acquisition and delivery of new electric vehicles to the second half of 2022.

Challenges to Electrification

Building out the necessary infrastructure to support our electrification goals requires coordination between property acquisition, bus delivery schedules, standardization of charging equipment, and the implementation of charging infrastructure. All of these elements also require sequencing between private (i.e., bus manufacturers, and battery and charging manufacturers) and public (i.e., City Departments such as Building and Safety, Water and Power, General Services, Bureau of Engineering and Fire) entities.

Additionally, in order to fully electrify and operate the transit fleet, the City must secure additional maintenance and electrification facilities. Given the expense and time invested in electric infrastructure, the transit industry is moving toward owning the maintenance and electrification facilities, instead of leasing them. LADOT is investigating other electrification models, including portable equipment that can be used with existing or minimal utility changes, that meet temporary BEB charging needs while we complete permanent electrification upgrades at our bus yards. LADOT is also open to pursuing shared maintenance facilities that support Citywide electrification efforts, including the electrification of all City fleets.

Citywide contracting restrictions during the COVID-19 pandemic prohibited progress on contracts for yard electrification. Since contracting resumed, staff shortages in key departments combined with a high demand for contracted services extended the process for executing contracts. Additionally, the BYD factory in Lancaster experienced shutdowns due to COVID-19 cases, which delayed the production of buses and impacted the bus delivery schedule.

Coupled with supply chain issues, these challenges delayed the build out of electric charging infrastructure at LADOT transit yards. Once a contract is executed, a yard can take between 1 and 2.5 years to be fully operational. This timeline accounts for site design, LADWP energization, other utility relocation and coordination, construction, and testing. Smaller projects that tap into existing power resources may be operational sooner, while larger projects that require power upgrades take longer to reach operation.

Next Steps

LADOT is finalizing contracts for six electric charging projects at bus facilities in 2023 and 2024, including the Compton Bus Maintenance Yard, Commercial St. Bus Maintenance Yard, 16th and Maple Bus Layover Facility, 1950 Washington Bus Maintenance Yard, and Sylmar Bus Maintenance Yard . Table 3 describes the six projects by bus facility, the communities served by the facility, and the projected operational date of the project. LADOT will pursue additional charging projects to meet future charging needs as it fully electrifies the fleet.

Table 3: LADOT Electric Bus Charging Installation Projects

Bus Facility	Yard Transit Service Area	Projected Operational Date
Compton Bus Maintenance Yard	South LA	2023
Commercial St Bus Maintenance Yard	Downtown	2023
16th and Maple Bus Layover Facility	Community DASH/Commuter Express	2023
1950 Washington Bus Maintenance Yard (Phase 1)	Central LA, Northeast LA, Boyle Heights	2023
1950 Washington Bus Maintenance Yard (Phase 2)	Central LA, Northeast LA, Boyle Heights	2024
Sylmar Bus Maintenance Yard	San Fernando Valley	2024

LADOT’s next priority for vehicle purchases is to replace older Commuter Express vehicles in the fleet with electric vehicles. LADOT submitted a successful application in early 2022 to use a portion of the FTA Section 5307 funds allocated by Metro towards the purchase of three electric buses to replace CNG buses currently operating on Commuter Express service. On March 31, 2022, LADOT also applied for FTA’s 2022 Low-No Emission 5339(a) grant program to procure 16 electric Commuter Express buses and 16 chargers to support zero-emission Commuter Express operations at the Sylmar Bus Maintenance Yard. LADOT’s ability to purchase additional electric buses leading up to the 2028 Olympic Games will depend on the increase in charging capacity at its facilities, as well as availability of federal and other funding sources for vehicles. LADOT is also exploring new federal funding opportunities for other electrification investments such as site procurement and upgrades.

FINANCIAL IMPACT

LADOT currently leverages FTA grant funding to purchase and maintain new electric vehicles. Electric vehicle charging installation at the bus yards will be funded by Prop A, Caltrans State of Good Repair funds (SB-1), the California Energy Commission, the California State Transportation Agency TIRCP, and Federal Transit Administration 5339 funds.

To date, there is no impact to the General Fund. Additional funding may be required in future budget years, with approval from the Mayor and Council, to expand transit electrification and associated infrastructure to meet our Citywide goals.

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