



Board Report

File #: 2023-0460, File Type: Contract

Agenda Number: 28.

OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE JANUARY 18, 2024

**SUBJECT: CONTRACT MODIFICATION WITH BYD FOR DEPOT AND OPPORTUNITY
CHARGER INSTALLATION**

ACTION: APPROVE RECOMMENDATION

RECOMMENDATION

AUTHORIZE the Chief Executive Officer (CEO) to execute Contract Modification No. 17 to BYD Coach & Bus, LLC, to perform the procurement and installation of four (4) 360kW depot chargers at Division 9 (D9) and the installation of four (4) 450kW Opportunity chargers at the El Monte Transit Center (EMTC) at a firm fixed price of \$6,470,605, including tax and delivery.

ISSUE

Delivery of ninety-five (95) BYD Battery Electric Buses (BEBs) is anticipated to begin in February 2024, and forty-three (43) of those BEBs will be used to support the J Line. The installation of the charging infrastructure identified in this contract modification is necessary to support the BEB operations on the J Line and other services originating from D9.

BACKGROUND

At its July 2017 meeting, the Board approved Motion #50 by Directors Bonin, Garcetti, Najarian, Hahn, and Solis, and as further amended by Directors Solis, Kuehl, Barger, and Fasana, to endorse Metro's Strategic Plan to complete the transition to zero emission electric buses by 2030, including converting the J Line to full Zero Emissions (ZE) operation as soon as feasible following the conversion of the G Line. Full BEB service on the G Line was completed in October 2021.

Planning and design efforts to electrify the J Line follow a similar model employed on the G Line, a combination of division charging and en route chargers. The J Line operates out of D9 and D18 (Carson). It also serves EMTC and HGTC. The delivery of ninety-five (95) BYD BEBs is scheduled to begin in February 2024, approximately two (2) years ahead of the fulfillment of complete charging infrastructure at D9 and D18.

This recommended contract modification for the installation of four (4) chargers at D9 and four (4) en route chargers at EMTC is necessary to meet the daily charging requirements for the forty-three (43) BEBs for operation on the J Line.

DISCUSSION

Consistent with Metro's Integrated Schedule for the Zero Emission Bus Program, Metro must install a limited number of chargers before full electrification to support the transition of Metro's BRTs to BEB. Full electrification work at D9 and D18 is projected to be completed by the end of 2025 and 2026, respectively in support of J Line electrification. However, charging infrastructure is needed to support the charging requirements for the BYD BEBs scheduled for delivery beginning February 2024. While chargers are being installed at D9 and EMTC as part of this contract modification, work will continue separately to advance en route charging at HGTC, which is expected to be completed in late Spring 2024.

Metro will utilize the chargers purchased through BYD and install them as noted above to support the delivery, testing, and operation of the 95 BYD BEBs. The scope of work for this contract modification includes the following:

- EMTC - installation, testing, and commissioning four (4) x 450kW chargers and associated equipment
- D9 - procurement, installation, testing, and commissioning of four (4) x 360kW chargers

Staff considered the installation of mobile chargers in advance of the full division transition; however, mobile chargers do not have the fast charge capability required to support J-Line service.

DETERMINATION OF SAFETY IMPACT

There is no impact on safety. The recommendations support the successful deployment and operation of 95 new BEBs and the full electrification of the J line.

FINANCIAL IMPACT

The budget for the recommended action is included in the Life of Project (LOP) budget of Capital project 201077 - BYD 40' Zero Emission Buses. Since this is a multi-year contract and project, the Project Manager, Cost Center Manager, and Chief Operations Officer will be responsible for budgeting costs in the future.

Impact to Budget

The combined funding for these actions include Regional Improvement Funds, and Proposition C 40. Additionally, there are multiple grant funding sources available, including LCTOP. Staff will continue to pursue all additional grant and rebate opportunities as they become available. This will help ensure that the Bus Acquisition and Electrification Program remains funded while enacting the fleet conversion to Zero Emissions. These funds are eligible for Bus and Rail Operations.

EQUITY PLATFORM

The J Line provides bus services to Equity Focus Communities (EFCs) from the EMTC through Downtown Los Angeles to the HGTC and approximately 75% of the walking distance catchment area along the route is designated as EFCs. The J Line runs through the 10 and 110 Freeways along a dedicated bus lane and serves the following ridership (Fall 2019 Silver Line Rider Survey):

- 48% below \$25K household income
- 68.3% had no car available
- 74% use transit 5+ days a week
- Rider Race/ethnicity Latino 58.3%; Black 15.2; White 10.6%; Asian/Pacific Islander 9.8%; Other 6.1%

It is recognized that BEBs provide improved air quality and quieter services compared to the current CNG bus fleet. The Transit Vehicle Manufacturer Disadvantaged Business Enterprise (DBE) requirements from the contract remain unchanged with this contract modification.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

This recommendation supports Goal #3, Enhance communities and lives through mobility and access to opportunity; and Goal #4, Transform LA County through regional collaboration and national leadership.

ALTERNATIVES CONSIDERED

The alternative is to receive the ninety-five (95) BYD Battery Electric Buses (BEBs) but not put them into service. This alternative is not recommended because it will require Metro to continue running CNG buses past the end of their design life, additional bus storage space, and potentially an additional investment in maintaining overaged CNG buses. Extending vehicle life also adversely impacts fleet reliability and diminishes the quality of services provided to Metro's passengers.

NEXT STEPS

Upon Board approval, staff will execute the Contract Modification to design and proceed with the installation of chargers for D9 and the EMTC to support the electrification of the J Line.

ATTACHMENTS

Attachment A - Motion #50
Attachment B - Procurement Summary
Attachment C - Contract Modification/Change Order Log
Attachment D - DEOD Summary

Prepared by: Julio Rodriguez, Sr. Manager, Project Control, (213) 922-6603
Jesus Montes, Sr. Executive Officer, Vehicle Engineering and Acquisition, (213) 418-3277
Debra Avila, Deputy Chief Vendor/Contract Management Officer, (213) 418-3051

Reviewed by: Conan Cheung, Chief Operations Officer, 213-418-3034



Stephanie N. Wiggins
Chief Executive Officer

**Board Report**

File #: 2017-0524, **File Type:** Motion / Motion Response**Agenda Number:** 50

**REVISED
REGULAR BOARD MEETING
JULY 27, 2017****Motion by:****DIRECTORS BONIN, GARCETTI, NAJARIAN, HAHN and SOLIS
AS AMENDED BY SOLIS, KUEHL and BARGER****FRIENDLY AMENDMENT BY FASANA**

July 27, 2017

Strategic Plan for Metro's Transition to Zero Emission Buses

LA Metro has developed a comprehensive plan to deliver a complete transition to zero emission electric buses by 2030. The transition plan is contingent on two primary factors: continuous advancements in electric bus technology (which must increase range, reduce bus weights, reduce charging times, extend battery life cycles), as well as a drop in prices as the technology develops.

As electric bus technology continues to advance, our electric grid is becoming cleaner by gradually eliminating coal from our energy portfolio and replacing it with renewable sources. A full transition to electric buses coupled with renewable energy sources promises mobility with significantly lower environmental impacts from this form of transportation.

In order to maintain our bus fleet in a state of good repair, Metro plans to continue replacing its aging bus fleet at approximately 200 buses per year. With firm local hiring requirements in Metro bus procurement, routine bus procurement presents a recurring opportunity that bolsters our local labor force in perpetuity.

In 2012, Metro's U.S. Employment Plan resulted in the award of an \$890 million contract to Kinkisharyo, a factory in Los Angeles County, and 404 quality railcar manufacturing jobs. Similarly, Metro can leverage recurring bus replacements to bolster labor throughout Los Angeles County

Metro plans to spend nearly one billion dollars on bus procurements in the next ten years. That level of investment, coupled with a transition to all electric buses, presents an opportunity for LA County to demonstrate leadership on combating climate change, and can make Los Angeles the central marketplace for new electric bus technology: a County rich with quality manufacturing jobs rooted in technologies that provide mobility, sustain a healthy environment and create career paths in clean

energy technologies.

**SUBJECT: MOTION BY BONIN, GARCETTI, NAJARIAN, HAHN
AND SOLIS AS AMENDED BY SOLIS, KUEHL AND
BARGER**

RECOMMENDATION

WE THEREFORE MOVE that the Board:

- A. ENDORSE the Strategic Plan for Metro's Transition to Zero Emission Buses;
- B. DIRECT the CEO to create a zero emission bus infrastructure working group comprised of Metro staff, federal and state regulators and local utility companies to track market availability and to cultivate ongoing collaboration among stakeholders. The working group will monitor market rates for emerging zero emission bus technology to support Metro's 2030 transition plan:
 - 1. Working group to report to the Board annually with the latest technology innovations to support the cost/benefit analysis of fleet conversion
 - 2. MTA to host an industry forum to solicit innovative solutions to delivering the 2030 plan;
- C. AMEND the Metro federal legislative plan to advocate for local jobs as a critical factor in the evaluation criteria of MTA procurements; and
- D. DEVELOP an equity threshold consistent with Title VI regulations for priority deployment of electric buses in underserved communities.

FURTHER MOVE that the Board direct staff to:

- A. As part of establishing a working group:
 - 1. EXPAND the invitation to regional air quality regulators (e.g. South Coast Air Quality Management District), the American Public Transportation Association and California Transit;
 - 2. EXAMINE and TRACK vehicle technology and performance, energy production and pricing, infrastructure needs and life-cycle analysis and creative funding opportunities.
- B. COORDINATE with the County of Los Angeles to explore opportunities to develop a countywide incentive structure to promote and attract more companies to manufacture, assemble and produce zero-emission transit vehicles and related technologies and infrastructure in Los Angeles County;
- C. Widely PROMOTE and ENCOURAGE municipal transit agencies/operators to participate in the established process by which to co-procure ("piggyback procurement" provisions) zero-

emission transit vehicles;

- D. ENSURE that MTA maintains the flexibility to explore the best available technologies that contributes to zero-emissions and/or net-negative emissions in the Los Angeles County public transit sector.

FRIENDLY AMENDMENT BY FASANA that staff report back to the board with a timeline and any commitments by parties before we undertake our next bus purchase and answers to the following questions:

- A. Will electric buses and their batteries deliver the guaranteed range and service?
- B. Can municipal and electric utilities timely invest in the grid in order to power electric buses?
- C. Which strategies will maximize Metro's ability to receive cap and trade credits?
- D. How and when can charging infrastructure be deployed at our bus divisions? More importantly, how will such infrastructure be paid for?
- E. Why is Metro's role critical for the adoption of low NOX engines in the trucking industry? What assurances do we have that this will take place when Metro has operated cleaner engines since the 1990s without adoption of these technologies by the trucking industry?
- F. What are the resiliency impacts to our service if electricity or natural gas service is disrupted? What is our back-up plan?
- G. Metro can intervene in regulatory proceedings at the California Public Utilities Commission for investor owned utilities regarding transportation electrification and equivalent natural gas proceedings as appropriate. Metro needs to assess the current regulatory schedule for such proceedings, develop advocacy position, and indicate that our adoption of electrification may be affected if electric transportation infrastructure is funded by shareholders, recovered through rates, and implemented on a timely basis.
- H. Conversely, how will Metro undertake the capital investments directly? Foothill Transit has intervened in the active proceeding. Antelope Valley and other providers are engaged. Metro needs to be more actively engaged and needs to report back to our Board on what is at stake. In SCE's service area, demand charges make the operating costs of electric buses more costly than natural gas vehicles. Are we working to influence changes to the rate schedules?
- I. Can RNG be adopted without direct Metro involvement by substituting RNG for natural gas purchased out of state? We should participate in any state framework that could create linkages between Metro's adoption of RNG and RNG implementation by the trucking industry.

PROCUREMENT SUMMARY

FORTY-FOOT (40') LOW FLOOR EMISSION TRANSIT BUSES/OP28367-002

1.	Contract Number: OP28367-002		
2.	Contractor: BYD Coach & Bus, LLC (BYD)		
3.	Mod. Work Description: Depot and Opportunity Charger Installation		
4.	Contract Work Description: Manufacture and Deliver Forty-Foot Low Floor Emission Transit Buses		
5.	The following data is current as of: 12/11/23		
6.	Contract Completion Status		Financial Status
	Contract Awarded:	9/08/2017	Contract Award Amount: \$47,774,724
	Notice to Proceed (NTP):	11/15/2017	Total of Modifications Approved: \$74,239,596
	Original Complete Date:	8/16/2019	Pending Modifications (including this action): \$6,470,605
	Current Est. Complete Date:	1/29/2024	Current Contract Value (with this action): \$128,484,925
7.	Contract Administrator: Greg Baker		Telephone Number: (213) 922-7577
8.	Project Manager: Julio Rodriguez		Telephone Number: (213) 922-6603

A. Procurement Background

This Board Action is to approve Contract Modification No. 17 to perform the installation of four (4) 360kW Heliox depot chargers at Division 9 and the accelerated installation of four (4) 450kW Opportunity chargers at the El Monte Transit Center (EMTC), at a firm fixed price of \$6,470,605, including tax and delivery. LACMTA previously purchased the chargers that will be installed through Contract Modification Numbers 6 and 7.

This Contract Modification will be processed in accordance with Metro's Acquisition Policy and the contract type is a firm fixed price. All other terms and conditions remain in effect.

On July 20, 2017, the Board awarded Contract No. OP28367-002 to BYD Coach & Bus, LLC, to manufacture and deliver sixty (60) forty-foot (40') Zero Emission (ZE) transit buses in the firm fixed price of \$47,774,724. Refer to Attachment B – Contract Modification/Change Order Log for a list of pending and negotiated change orders.

B. Cost Analysis

The recommended price of \$6,470,605 including tax and delivery, has been determined to be fair and reasonable based upon the independent cost estimate, cost analysis, technical evaluation, and fact finding.

Proposal Amount	Metro ICE	Negotiated Amount
\$6,470,605	\$8,177,178	\$6,470,605

The proposed cost is lower than Metro’s Independent Cost Estimate (ICE) as Metro’s estimate was based on procuring five (5) shell masts rather than a combination of L-shaped masts and shell masts as proposed by the Contractor. Additionally, Metro used a higher price for the chargers in the estimate based on previous pricing, however, the Contractor was able to propose the chargers at a lower price.

CONTRACT MODIFICATION/CHANGE ORDER LOG

FORTY-FOOT (40') LOW FLOOR EMISSION TRANSIT BUSES/ OP28367-002

Mod. No.	Description	Status (approved or pending)	Date	\$ Amount
1	Modify SP-38 LEP definition of Disadvantage Worker	Approved	1/9/19	\$0
2	Exercise 3.0 Optional Configuration - APC PF-1	Approved	12/3/19	\$326,780.00
3	Extend Period of Performance for Base Buy to 11/1/2021	Approved	12/27/19	\$0
4	Negotiated changes in configuration on base buy buses	Approved	4/4/20	(\$473,709.75)
5	Procure 10 shop chargers	Approved	10/22/20	\$450,514.00
6	On-Route OPP chargers (8) Difference from original 300kW to 450kW	Approved	5/20/21	\$450,592.80
7	Depot Chargers, Licenses, Monitoring, Infrastructure	Approved	6/30/21	\$22,938,871.73
8	Exercise Option 1 for 40 Battery Electric Buses	Approved	7/26/21	\$30,863,440.00
9	Negotiated changes for installing External MirrorEye Camera System and MERV-13 Air Filtration System	Approved	1/10/22	\$47,855.57
10	Modeling Software	Approved	3/3/22	\$241,796.50
11	Vehicle Telematics and Charge Management System & K9MD-ER Extended Range Buses	Approved	3/24/22	\$17,969,613.80
12	HGTC Switch Gear	Approved	10/19/22	\$567,259.20
13	Expedited Schedule for HGTC Switch Gear	Approved	3/22/23	\$90,000.00
14	Fifteen (15) 50kW-90kW DC Fast Portable Chargers with CCS1 Dispenser for Electric Buses	Approved	10/19/23	\$657,690.19
15	Install Four (4) Steel Skid Plates on each of the One Hundred (100) Buses	Approved	11/1/2023	\$87,107.00
16	Add State of Charge (SOC) Information in Front Destination Sign	Approved	11/7/2023	\$21,785.00
17	Depot and Opportunity Charger Installation	Pending	Pending	\$6,470,604.40
	Modification Total:			\$80,710,200.44

	Original Contract:	Approved		\$47,774,723.91
		Total:		\$128,484,924.35

DEOD SUMMARY

DEPOT AND OPPORTUNITY CHARGER INSTALLATION/OP28367-002

A. Small Business Participation

BYD Coach and Bus, LLC, a Transit Vehicle Manufacturer (TVM), is on the Federal Transit Administration's (FTA) list of eligible TVMs. At the time of the contract award, BYD Coach and Bus, LLC was listed as an Eligible Transit Vehicle Manufacturers (TVM). TVMs submit overall DBE goal methodology and semi-annual reports directly to FTA.

B. Living Wage and Service Contract Worker Retention Policy Applicability

The Living Wage and Service Contract Worker Retention Policy is not applicable to this contract.

C. Prevailing Wage Applicability

Prevailing Wage requirements are applicable to this project. DEOD will monitor contractors' compliance with the State of California Department of Industrial Relations (DIR), California Labor Code, and, if federally funded, the U S Department of Labor (DOL) Davis Bacon and Related Acts (DBRA).

D. Project Labor Agreement/Construction Careers Policy

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract. Project Labor Agreement/Construction Careers Policy is applicable only to construction contracts that have a construction contract value in excess of \$2.5 million.

BYD K9MD (201077) J Line Charging Infrastructure



Metro

Operations, Safety, and Customer Experience Committee
January 18, 2024

Background

January 2021:

- Full BEB service on the G Line commenced and was supported by en-route chargers at the North Hollywood, Canoga, and Chatsworth Stations.
- Planning and design efforts to electrify the J Line follow a similar model of division and en-route charging. The J Line operates out of D9 (El Monte) and D18 (Carson). It also serves terminals at EMTC and HGTC.

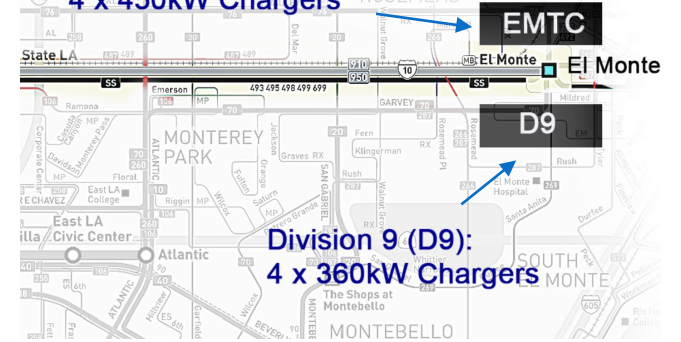
February 2024:

- The delivery to Metro of ninety-five (95) BYD BEBs is scheduled to begin in February 2024, approximately two (2) years ahead of the completion of permanent charging infrastructure at D9 and D18.

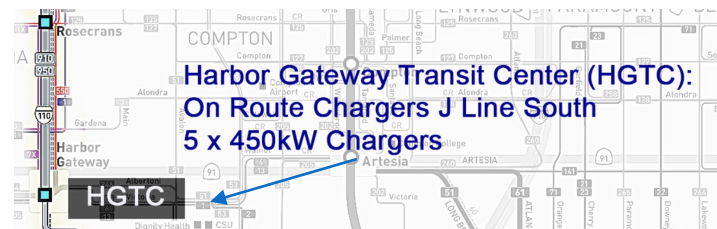
J Line Charging Infrastructure Overview



**El Monte Transit Center (EMTC):
On Route Chargers J Line North
4 x 450kW Chargers**



**Division 9 (D9):
4 x 360kW Chargers**



**Harbor Gateway Transit Center (HGTC):
On Route Chargers J Line South
5 x 450kW Chargers**



Metro

Benefits of Requested Change

- The J Line will benefit from this change by allowing J Line electric buses to run close to 90% of the J Line blocks until the J Line charging infrastructure is finalized.
- These chargers will also allow servicing of local routes originating from D9.

Recommendation

EXECUTE Contract Modification No. 17 to BYD Coach & Bus, LLC, to perform the procurement and installation of Four (4) 360kW depot chargers at Division 9 (D9) and the installation of four (4) 450kW opportunity chargers at the El Monte Transit Center (EMTC) at a firm fixed price of \$6,470,605.