

## PROJECT DELIVERY, UNSOLICITED PROPOSALS, AND CHARGING AS A SERVICE

### *Program Project Delivery to Date*

To date, Metro has employed two delivery methods for its ZEB projects. For example, division 9, El Monte Transit Center, and Harbor Gateway Transit Center were pursued as Design Bid Build (DBB). In contrast, Divisions 18 and 7 will be pursued through a Progressive Design Build (PDB) delivery method. In the former approach, Metro designs the project to 100%, while in the latter, Metro benefits from early contractor involvement during the design phase. Metro continues to evaluate the costs, benefits, opportunities, and challenges of traditional and alternative delivery methods in the remaining seven divisions. Metro also continues to consider other alternative delivery methods, including Design Build, Operate Maintain (DBOM), Progressive Design Build, Operate and Maintain (PDBOM), and Charging-as-a-Service (CaaS). Discussion of DBOM and CaaS will continue in the Cost and Funding section of this report.

As noted previously, Metro released a regional procurement to purchase up to 1,980 ZEBs. For local and municipal operators who wish to participate, Metro will assign option bus quantities based on local and municipal operator needs. Operators do not need to commit to a quantity until after the procurement award. The assignability of options approach preserves flexibility and reduces the administrative burden on Metro and participating municipal operators. Metro expects to release another bus procurement no later than 2029 for the remainder as well as any additional buses for local and municipal operators, unlocking the latest zero-emission technology advancements and potentially limiting exposure risk to a single fleet type.

### *Unsolicited Proposals*

In 2019, Metro received two unsolicited proposals related to the ZEB program: one from Proterra for a Bus-as-a-Service (BaaS) delivery approach and one from Amply (now bp Pulse) for a Charging-as-a-Service (CaaS) delivery approach. Each proposal offered Metro potential opportunities to spread capital expenditures over the life of the project and transfer risk to a private partner in exchange for long-term asset performance. The proposal review team recommended Metro advance toward an alternative delivery approach for Phase II of the ZEB program. In June 2021, the CEO directed the Office of Strategic Innovation (OSI) to proceed with a business case and assess alternative program delivery approaches to assist with achieving Metro's goals.

### *Charging-as-a-Service and Other Alternative Delivery Methods*

In January 2022, Metro retained a financial advisor to initiate an evaluation of program delivery options. Following qualitative analysis and market soundings, Metro developed a conceptual project scope comprised of Divisions 3, 5, 13, and 15, as well as evaluated three "as-a-service" delivery approaches in the preliminary business case:

- **CaaS with energy management:** Includes facility upgrades, charging infrastructure, distributed energy resources, management systems, and operations/maintenance of the charging infrastructure. A project developer would commit to the timely delivery of the assets as well as the infrastructure's ongoing performance and availability.
- **CaaS with Vehicle Delivery Only:** This includes all scope elements from Option 1, as well as the acquisition and on-time delivery of the buses.
- **BaaS:** Includes all scope elements from Option 2, as well as maintenance and long-term performance of the buses.

The inclusion of buses in the project bundle introduces a significant cost increase compared to the base CaaS approach. Financing buses, primarily through private instruments, would likely introduce a high cost of capital over the life of the project. Given that the U.S. bus market is limited and technology is still developing, the market's appetite to bear vehicle performance risk beyond standard warranties remains untested. However, Metro bears the sole risk of vehicles not meeting its performance needs under Metro's current bus acquisition approach.

The assessment concluded that due to the uncertainty surrounding several factors, not least the performance of buses and charging equipment, a progressive contracting approach, like CaaS, PDB, or Progressive DBOM, could enable several benefits, including:

- **Collaboration:** Early contractor involvement could allow Metro to collaborate with the private sector to better understand the risks related to costs as well as technical constraints regarding the transition to ZEB, test assumptions, and validate the project's commercial/financial feasibility. This iterative process would allow Metro to refine the project scope and schedule with the private partner as new information and analysis are completed while maintaining control over the overall project outcome.
- **Global Private Sector Expertise:** Metro will benefit from private sector expertise and innovation in optimal technology to deliver the ZEB transition and provide opportunities for improved outcomes through early involvement in the design of solutions. In 2022, 66,000 BEBs were sold worldwide, but only 2,000 were sold in the U.S. While the U.S. lags behind Asia and Europe in BEB deployments, there is vast international experience available in the marketplace that can deliver tangible benefits to Metro.
- **Pricing Risk:** The better a contractor understands a risk, the more likely it is to price that risk efficiently. Early contractor involvement may help drive more efficient pricing for project activities and reduce contingencies for shared/transferrable risk opportunities.

- **Project Schedule and Concurrent Activities:** Early contractor involvement with these alternative delivery strategies will enable Metro to accelerate project development as well as allow various planning, procurement, environmental, permitting, and development activities to occur concurrently using early work packages (e.g., utility capacity upgrades).

Metro staff continue to evaluate the cost and benefit of alternative delivery methods, including the extent to which Metro may require access to financing to deliver the latter phases of the program, as well as operations/maintenance support to ensure high levels of performance of charging equipment. While alternative delivery approaches may help Metro manage the cost of the transition through risk transfer and spreading costs over the asset lifecycle, lessons learned from Metro's existing ZEB projects and contracted bus service will be crucial to understanding the potential total cost of the transition as a benchmark.