



Board Report

File #: 2017-0782, File Type: Contract

Agenda Number: 49.

REGULAR BOARD MEETING SEPTEMBER 27, 2018

**SUBJECT: TECHNICAL CONSULTANT FOR ZERO EMISSION BUS
(ZEB) PROGRAM MASTER PLAN**

ACTION: CONTRACT AWARD

RECOMMENDATION

CONSIDER:

- A. AWARDING a cost plus fixed fee Contract No. PS51220 to ZEBGO Partners, JV for technical consultant services for the Zero Emission Bus (ZEB) Program Master Plan, in the not-to-exceed amount of \$7,139,376 for a period of performance of up to 21 months from issuance of a Notice-to-Proceed (NTP), subject to resolution of protest(s), if any; and
- B. AMENDING the FY19 budget by \$6,111,500 for anticipated contract expenses.

ISSUE

In July 2017, the Board approved Motion #50 by Directors Bonin, Garcetti, Najarian, Hahn, and Solis (with amendments) to establish a working group and develop strategies for a master plan detailing the steps and costs associated with converting the Metro bus fleet to Zero Emission by 2030. (Attachment C) This action authorizes contract award to ZEBGO Partners, JV (ZEBGO) to provide technical consulting support services to develop comprehensive plans for phasing in zero emission buses (ZEB) on Metro's entire system, including Local and Rapid bus routes, by 2030.

BACKGROUND

In July 2017, the Metro Board endorsed staff's Strategic Plan for the Transition to Zero Emission Buses. The first phase in that plan is to convert the Metro Orange Line to full Zero Emission operation by 2020 and the Metro Silver Line as soon as feasible, thereafter. The second phase involves the creation of a Zero Emission Master Plan that would evaluate the entire Metro bus system and map out the best strategy and anticipated cost to convert to zero emission operation. Authorization of this Contract will support staff's efforts to affect the Strategic Zero Emissions Master Plan [Plan].

The transition plan is in agreement with Metro's Alternative Fuel Initiative policy that was adopted in

1993 and keeps Metro at the forefront of a healthier environment for our growing population. This plan also accelerates by 10 years the schedule being considered by CARB to require all of California's transit services to transition to 100% zero emissions by 2040.

To date, Metro has awarded three ZEB contracts for the electrification of the Orange and Silver BRT lines; two with BYD for five 60' ZEB's intended for the Orange Line and sixty 40' ZEB's intended for the Silver Line; and one with New Flyer for forty 60' ZEB's intended for the Orange Line.

DISCUSSION

Awarding this professional services contract to ZEBGO ensures Metro remains on schedule with transitioning to a zero emissions bus operation by 2030. The award recommendation is based on a Best Value selection that considered price and non-price factors. ZEBGO's proposal provides the Best Value and is most advantageous to Metro. Price analysis shows that the negotiated amount for the recommended firm, ZEBGO, is \$633,670 above the ICE. ZEBGO's higher priced proposal, from a Best Value perspective, offers clear advantages in the areas of relevant Zero Emission vehicle and infrastructure experience and capability; project understanding, approach, and management plan; and past experience for similar projects evaluation categories.

ZEBGO's higher proposed price is offset by providing a team of subject matter experts that far exceeded the minimum staff qualifications, and collectively have multiple transit agency experience in operating, maintaining and procuring buses, from both the transit manufacturing and operations sides. The ZEBGO team demonstrated a wide array of global electric bus experience, including deployment of electric bus depot and in-route chargers, and experience on projects with other United States transit agencies that are similar in scope and scale as the Metro program. This relevant experience and expertise in ZEB vehicle and infrastructure is critically important to the technology transition because of Metro's program timeline objectives and the rapid changes occurring in this developing field.

DETERMINATION OF SAFETY IMPACT

The approval of this Contract will have no negative impact to system safety.

FINANCIAL IMPACT

The total not-to-exceed contract amount is \$7,139,376. Staff recommends that the FY19 budget be amended by \$6,111,500 to include the portion of effort scheduled for completion in FY19. The budget will be allocated to project 405407 - ZEB Program Master Plan. Since this is a multi-year contract, the cost center manager will be accountable for budgeting the balance of funds in future fiscal years.

Impact to Budget

The current source of funds for this action is Measure R Admin. Staff will reassess funding sources and apply other applicable fund sources as they become available.

ALTERNATIVES CONSIDERED

Metro could rely exclusively on internal staff to perform the work. This alternative is not recommended as it would not be cost effective to maintain this level of expertise in-house on a full-time basis. Additionally, it would take staff away from the core operation functions, and would be more costly than contracting these functions on a task order basis.

The Board of Directors may choose not to authorize the Contract award for the project; however, this alternative is not recommended by staff, as this project is critical to support the planning necessary for conversion to Zero Emission operation by 2030. Without the additional contract support the timely delivery of this plan would be at risk.

NEXT STEPS

Upon Board approval, staff will execute the contract and issue a Notice-to-Proceed to ZEBGO.

ATTACHMENTS

Attachment A - Procurement Summary

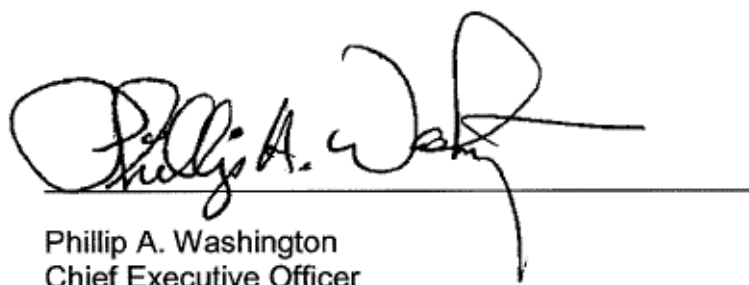
Attachment B - DEOD Summary

Attachment C - Board Motion

Board Motion 2017-0524 Endorsing Strategic Plan for Metro's Transition to Zero Emission

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Phillip A. Washington
Chief Executive Officer

PROCUREMENT SUMMARY

**TECHNICAL CONSULTANT FOR ZERO EMISSION BUS PROGRAM
MASTER PLAN/PS51220**

1.	Contract Number: PS51220	
2.	Recommended Vendor: ZEBGO Partners, Joint Venture	
3.	Type of Procurement (check one): <input type="checkbox"/> IFB <input checked="" type="checkbox"/> RFP <input type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	Procurement Dates:	
	A. Issued: 02/14/18	
	B. Advertised/Publicized: 02/20/18; 02/21/18; 02/26/18	
	C. Pre-Proposal Conference: 02/27/18	
	D. Proposals Due: 03/29/18	
	E. Pre-Qualification Completed: 05/17/18	
	F. Conflict of Interest Form Submitted to Ethics: 05/31/18	
	G. Protest Period End Date: 07/20/18	
5.	Solicitations Picked up/Downloaded: 61	Bids/Proposals Received: 2
6.	Contract Administrator: Elizabeth Hernandez	Telephone Number: (213) 922-7334
7.	Project Manager: Marc Manning	Telephone Number: (213) 617-6201

A. Procurement Background

This Board Action is to approve Contract No. PS51220 for technical consulting support services to develop comprehensive plans for phasing in zero emission buses (ZEB) on Metro's entire system, including Local and Rapid bus routes, by 2030. Board approval of contract awards are subject to resolution of any properly submitted protest.

The RFP was issued in accordance with Metro's Acquisition Policy and the contract type is a cost plus fixed fee.

Five amendments were issued during the solicitation phase of this RFP:

- Amendment No. 1, issued on March 12, 2018, clarified proposal requirements;
- Amendment No. 2, issued on March 23, 2018, clarified proposal requirements;
- Amendment No. 3, issued on May 7, 2018, clarified proposal requirements;
- Amendment No. 4, issued on May 11, 2018, solicited Best and Final Offers (BAFO); and
- Amendment No. 5, issued on May 15, 2018, clarified BAFO submittals.

A Pre-Proposal Conference was held on February 27, 2018. Proposer Questions and Metro staff answers were issued and made accessible to the planholders by posting them at Metro's website. A total of two proposals were received on March 29, 2018.

B. Evaluation of Proposals

A Proposal Evaluation Team (PET) consisting of staff from Vehicle Engineering and Acquisition, Maintenance and Operations departments was convened and conducted a comprehensive technical evaluation of the proposals received.

The proposals were evaluated based on the following evaluation criteria and weights:

- Experience and Capability 30 percent
- Project Understanding/Approach and Management Plan 20 percent
- Firm's Experience on Similar Projects 15 percent
- Availability 5 percent
- Price 30 percent

The evaluation criteria are appropriate and consistent with criteria developed for other, similar professional services procurement. Several factors were considered when developing these weights, giving the greatest importance to experience and capability in performing similar work.

Both of the proposals received were determined to be within the competitive range. The two firms within the competitive range are listed below in alphabetical order:

1. Ramboll US Corporation
2. ZEBGO Partners, Joint Venture

The proposal evaluation period from March 29, 2018 through May 29, 2018 included reviews of the written proposals, clarifications requests and responses, oral presentations, face-to-face and conference call discussions, and transit agency reference checks. On April 26, 2018 the PET met and interviewed the firms. The firms' project manager, deputy project manager, and lead subject matter experts (SMEs) had an opportunity to present individual and team's qualifications and respond to the PET's questions. In general, each team's presentation addressed the requirements of the RFP, experience with all aspects of the required tasks, and stressed each firm's commitment to the success of the project. Also highlighted were staffing plans, work plans, perceived program challenges and risk mitigation process. Each team was asked questions relative to each firm's proposed methodology/approach and previous experience for a program with similar scope and size.

A cost analysis was performed on the Proposer's price offers in preparation of negotiations conducted on May 3, 2018. Proposer strengths and weaknesses in technical and price elements were discussed prior to requesting Best and Final offers. Best and Final Offers (BAFO) were solicited on May 11, 2018 and submittals

were received on May 22, 2018. The BAFOS were reviewed and evaluated by the PET from May 23, 2018 through May 29, 2018.

Qualifications Summary of Firms within the Competitive Range:

ZEBGO Partners, JV

WSP (Partner)

WSP is an engineering and professional consulting firm founded in 1885 and has 42,000 employees and 500 offices globally. It has 100 offices in the United States and four of them are located in Southern California with a staff of 300 employees.

WSP has electric bus experience with more than 30 projects in the world, including 13 in North America for transit agencies such as Massachusetts DOT, King County Metro, DART, and IndyGo. WSP has planned, designed and rehabilitated more than 700 bus maintenance facilities.

STV (Partner)

STV, Incorporated was founded over 100 years ago and provides architectural, engineering, planning, environmental, and construction management services for transportation systems, infrastructure, buildings, energy, and other facilities.

STV has over 30 years of experience planning, designing and implementing bus projects for public transit agencies such as LADOT, SANDAG, OCTA and SEPTA.

The ZEBGO JV proposes to augment its capabilities with expertise and specialty resources in areas such as utility coordination and interface, technology facilitation, industry outreach and best practices, facilities inventory and conversion options, sustainability practices and metrics, project administration, document control, Buy America compliance, and bus procurement and inspection. The ZEBGO team includes the following subcontractors:

- Advantec Consulting Engineers, Inc.
- Advanced Mobility Group
- Capitol GCS
- Center for Transportation and Environment (CTE)
- Fuel Solutions
- 3Cotech
- Virginkar & Associates

ZEBGO has multiple subject matter experts (SME) with transit agency experience in operating, maintaining, and procuring buses. ZEBGO would be able to leverage three different electric bus modeling techniques that had been developed and

utilized for other agencies. ZEBGO's proposal discussed experience for over 50 Zero Emission Bus (ZEB) projects. This includes an electric bus feasibility study with King County. With these projects, ZEBGO has relevant experience in deploying both depot and en-route charging infrastructure. ZEBGO's subcontractor, CTE, has worked with numerous transit agencies to model, procure, and deploy electric and fuel cell buses. Due to relevant experience, they have the ability to work on various tasks with minimal Metro oversight and accelerate various tasks as needed to meet procurement schedules.

Ramboll US Corporation

Ramboll US Corporation, formed in 1982, provides technical and strategic consulting expertise to clients for environmental and health issues. Ramboll has more than 13,000 employees in 200 offices located in 35 countries. Ramboll's local management staff is located in Los Angeles.

Ramboll currently provides technical support to Metro through the Advanced Technology Transit Vehicle Consortium (ATVC) for its recent Zero Emission Bus procurements and with regulatory agencies on air pollution policy impacts to Metro's bus acquisition plans. Ramboll also has project experience with the municipality of Oslo and Akershus county of Norway in assessment of bus fleet electrification via in-motion-charging trolley buses. Ramboll's clients include the Port of Los Angeles, AC Transit, San Diego Metropolitan Transportation Systems (MTS), SANDAG, Santa Monica, Foothill, and Translink.

Ramboll proposed a team of subject matter experts in ZE technologies and systems integration, bus operations, service planning, facilities, utilities, and financing at the local level and from global and nationwide agencies consisting of the following:

- AECOM
- M.J. Bradley & Associates
- Gladstein, Neandross & Associates
- Capitol CGS
- Connetics Transportation Group
- Burns & McDonnell
- McCormick Busse, Inc.
- Virginkar & Associates

Ramboll's proposal identified some key personnel from local and global resources. Additionally, they have staff with zero emission vehicle experience at Metro. They also demonstrated experience in utility and capacity planning with Los Angeles Department of Water and Power (LADWP). Currently, their relevant electric bus experience is limited on deployment of charging infrastructure. They have a few projects in process that would provide that relevant experience in the future. The PET evaluated the proposals and assessed strengths, weaknesses and associated risks of each Proposal utilizing the evaluation criteria factors and sub-

factors defined in the RFP to determine the score for each firm. The ZEBGO JV had demonstrated advantages in all technical areas of Experience and Capability; Project Approach and Experience for relevant Projects of similar scope and size. Based upon the collective evaluations, ZEBGO Partners, JV is determined to be the PET's recommendation for the top ranked firm based on the scores as indicated in the table below.

1	Firm	Average Score	Factor Weight	Weighted Average Score	Rank
2	ZEBGO Partners, JV				
3	Experience and Capability	86.40	30.00%	25.92	
4	Project Understanding/Approach and Management Plan	82.50	20.00%	16.50	
5	Firm's Experience on Similar Projects	82.53	15.00%	12.38	
6	Availability	85.00	5.00%	4.25	
7	Price	75.20	30.00%	22.56	
8	Total		100.00%	81.62	1
9	Ramboll US Corporation				
10	Experience and Capability	60.63	30.00%	18.19	
11	Project Understanding/Approach and Management Plan	61.75	20.00%	12.35	
12	Firm's Experience on Similar Projects	55.00	15.00%	8.25	
13	Availability	66.20	5.00%	3.31	
14	Price	100.00	30.00%	30.00	
15	Total		100.00%	72.10	2

C. Cost/Price Analysis

The recommended price has been determined to be fair and reasonable based upon adequate price competition, Management Audit Services (MAS) audit findings, an independent cost estimate, cost analysis, technical evaluation, fact finding, and negotiations.

	Proposer Name	Proposal Amount	Metro ICE*	Negotiated or NTE amount
1.	ZEBGO Partners, JV	\$7,690,905	\$6,505,706	\$7,139,376
2.	Ramboll US Corporation	\$5,483,671	\$6,505,706	\$5,370,780

*ICE includes costs for labor, travel and fee; excludes direct costs and general and administrative costs

Best Value Analysis

Metro's PET determined that when considering price and non-price factors, ZEBGO's proposal provides the Best Value and is most advantageous to Metro. Price analysis shows that the negotiated amount for the recommended firm, ZEBGO, is \$633,670 above the ICE. ZEBGO's higher priced proposal, from a Best Value perspective, offers clear advantages in the areas of relevant Zero Emission vehicle and infrastructure experience and capability, project understanding/ approach and management plan, and past experience for similar projects evaluation categories.

ZEBGO's higher proposed price is offset by providing a team of subject matter experts that far exceeded the minimum staff qualifications and collectively, have multiple transit agency experience in operating, maintaining and procuring buses, both from the manufacturing and transit operations sides. The ZEBGO JV team demonstrated a wide array of global electric bus experience, including deployment of electric bus depot and in-route chargers and experience with projects with other United States transit agencies that are similar in scope and scale as the LA Metro program. This relevant experience and expertise in ZEB vehicle and infrastructure is critically important to the technology transition because of Metro's program timeline objectives and the rapid changes occurring in this developing field. ZEBGO will utilize three types of service-proven simulation and modeling tools to validate various bus electrification scenarios.

D. Background on Recommended Contractor

The recommended firm, ZEBGO Partners, Joint Venture, is a partnership formed between WSP USA Inc. (formerly WSP|Parsons Brinckerhoff) and STV Incorporated to provide technical consulting services for Metro's Zero Emission Bus (ZEB) Program Master Plan. Both of the partners in the JV have offices located in Los Angeles, California.

Under a similar joint venture partnership, WSP and STV were awarded contracts to develop the performance-based technical specifications and commercial requirements for procurement of heavy rail vehicles for Metro and Massachusetts Bay Transportation Authority (MBTA). As a joint venture, these firms have undertaken the following transportation projects for Los Angeles:

- Heavy Rail Vehicle Acquisition Consulting Services and Program Control Support Services (LACMTA)
- Los Angeles World Airport Landslide Access Modernization Program
- Connect LAX Airport Metro Connector

ZEBGO's team of subject matter experts has ZEB master planning experience with other large transit agencies that include Boston, Seattle, Indianapolis and Albuquerque in the U.S., and Halifax and Calgary in Canada.

DEOD SUMMARY

**TECHNICAL CONSULTANT FOR ZERO EMISSION BUS MASTER PLAN /
CONTRACT NUMBER PS51220**

A. Small Business Participation

The Diversity and Economic Opportunity Department (DEOD) established a 15% Disadvantaged Business Enterprise (DBE) goal for this solicitation. ZEBGO Partners, Joint Venture exceeded the goal by making a 17.26% DBE commitment.

Small Business Goal	15% DBE	Small Business Commitment	17.26% DBE
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	DBE Partners	Ethnicity	% Committed
1.	ADVANTEC Consulting Engineers, Inc.	Asian Pacific American	1.87%
2.	Capitol Government Contract Specialist	Hispanic American	10.08%
3.	3COTECH, Inc.	Caucasian Female	0.36%
4.	Virginkar & Associates, Inc.	Subcontinent Asian American	4.95%
	Total Commitment		17.26%

B. Living Wage and Service Contract Worker Retention Policy Applicability

The Living Wage and Service Contract Worker Retention Policy (LW/SCWRP) is not applicable to this Contract.

C. Prevailing Wage Applicability

Prevailing wage is not applicable to this Contract.

D. Project Labor Agreement/Construction Careers Policy

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract.

Metro



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.