

ADVANCED TRANSIT VEHICLE CONSORTIUM

Los Angeles County Metropolitan Transportation Authority
470 Bauchet Street, MS 30-2-1
Los Angeles, CA 90012

JUNE 7, 2013

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Executive Vice President:

John Drayton
Manager, Vehicle Technology
Los Angeles Metro

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Josie Nicasio
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Los Angeles Metro

TO: BOARD OF DIRECTORS

SUBJECT: ZERO EMISSION BUSES

ACTION: APPROVE CONTRACT AWARD RECOMMENDATION FOR ZERO EMISSION BUSES TO BYD

RECOMMENDATION

- A. Award Contract No. OP33202790, to BYD Company Ltd (BYD), Los Angeles, CA, for the manufacturing and delivery of up to twenty-five Zero Emission Buses for a not-to-exceed total contract value of \$20,739,250, including tax and delivery.
- B. Establish a Life-of-Project (LOP) budget for this ATVC project in the amount of \$30,000,000 for Zero Emission Buses in CP201071 – 30 Zero Emission Buses/SLEB Buy.
- C. Approve and amend the FY14 Budget to include the addition of two dedicated FTE's to support ATVC's Zero Emission Bus project, including one electric bus engineer and one electric bus instructor.
- D. Authorize ATVC staff to initiate a new RFP for the conversion of six existing Metro gasoline electric hybrid buses to Super Low Emission Bus standards.

All items above are subject to ratification by Metro's Board of Directors.

ISSUE:

In March 2011, the Metro Board directed staff to initiate a new procurement for up to 30 "Super low emission or zero emission buses." In June 2011, the Metro Board directed that the Advanced Transit Vehicle Consortium (ATVC) take responsibility for overseeing this project, and that it would follow an RFIQ process to determine the current state of these technologies, followed by a Best Value RFP for up to 30 buses.

Metro Board ratification of the ATVC's award approval of RFP OP33202790 will allow staff to authorize BYD to proceed with an initial build and delivery of five buses for testing and evaluation purposes. Based on successful testing and evaluation of the five Zero Emission Buses, staff may then proceed with up to twenty additional buses from BYD.

DISCUSSION

Zero Emission technologies, and particularly energy storage technologies, are evolving very rapidly. It is anticipated that vehicles available even within the next 1-3 years are likely to have significantly enhanced operating characteristics, such as extended range, better integrated subsystems, and lighter weight construction. Staff anticipates reporting back to the ATVC and Metro Boards on a regular basis, and may recommend initiating new procurements for additional "Next Generation" Zero Emission and Super Low Emission Buses based on technology developments anticipated within the next 12-36 months.

ATVC purchased six gasoline electric hybrid buses in 2008. These buses use a hybrid propulsion system provided by the former ISE Inc., of Poway, CA. ISE went bankrupt and discontinued all operations in 2010, and Metro Operations has not been able to support operation of these vehicles since that time.

There are several firms that have the specialized capabilities in bus system integration, and who also have the specialized expertise needed to return these buses to a fully operational condition. Converting these buses to an upgraded "Super Low Emission" (SLEB) configuration is consistent with the intent of the original direction from Metro's Board. Staff will use a performance contract that includes incentives for firms that provide the technical and maintenance support necessary to keep this equipment in a reliable operating condition.

As part of this project, staff recommends adding two positions in the FY14 budget. The first position would be an electric bus engineer who would specialize in high voltage electrical systems and components. A second position would be an electric bus instructor. Both of these positions would be dedicated to this project, and would support both the delivery of this equipment and its release into revenue service. Once these buses are put into service, these positions would be responsible for providing training and technical support for Metro's all electric buses, as well as providing support for future all-electric bus projects that may follow this project.

The contract award to BYD is \$20,739,250. The LOP budget is \$30,000,000. The remaining \$9,260,750 will be used for the conversion of the gasoline electric hybrid buses, as well as procurement of the necessary peripheral systems and components. Staff will bring these items to the board for separate approval.

DETERMINATION OF SAFETY IMPACT

There is no anticipated safety impact for procuring and operating new all-electric buses. In general, safety provisions found on new buses is superior in design, quality and functionality compared to the safety systems of old buses that have reached the end of their life and are being taken out of service.

Zero emission buses are expected to use high voltage electrical systems. While these systems are isolated from operators and passenger compartments, maintenance personnel will need additional training to ensure that they are prepared to maintain these high voltage systems.

FINANCIAL IMPACT

The LOP requested for this report is \$30,000,000. LOP funding of \$6,092,919 is included in the FY14 Budget in Cost Center 3320 – Vehicle Technology, Project 201071 – 30 Zero Emission Bus/SLEB Buy. Since this is a multi-year project, the cost center manager, project manager, and General Manager will ensure that costs will be budgeted in future fiscal years.

Impact to Budget

The source of funds is Measure R 35%. Staff will reassess funding sources and apply other applicable fund sources as they become available.

ALTERNATIVES CONSIDERED

Staff considered awarding a contract for Super Low Emission Buses (SLEB), but this is not recommended. ATVC currently has six inoperable gasoline hybrid buses that can be repowered in a SLEB configuration, and it is a better use of ATVC/Metro funding to have these existing buses converted to an SLEB configuration.

NEXT STEPS

If the Metro Board ratifies the ATVC's award of Contract OP33202790 for up to 25 ZEB vehicles, ATVC staff will execute the Contract and issue a notice to proceed. Staff will also take steps to issue a new RFP for conversion of the six gasoline electric hybrid buses to an upgraded SLEB configuration.

ATTACHMENT(S)

Attachment A: Procurement Summary

Attachment B: Proposed LOP Budget

Attachment C: June 2011 Super Low/Zero Emission Bus Program Board Report

Prepared by: John Drayton, Executive Vice President, ATVC

A handwritten signature in black ink, appearing to read "Richard Hunt", is written above a horizontal line.

Richard Hunt

President

Advanced Transit Vehicle Consortium

**PROCUREMENT SUMMARY
UP TO THIRTY ZERO EMISSIONS BUSES**

1.	Contract Number: OP33202790	
2.	Recommended Vendor:	
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: February 9, 2012	
	B. Advertised/Publicized: February 18, 2012	
	C. Pre-proposal/Pre-Bid Conference: February 23, 2012	
	D. Proposals/Bids Due: June 22, 2013	
	E. Pre-Qualification Completed: 5/23/12	
	F. Conflict of Interest Form Submitted to Ethics: May 21, 2013	
	G. Protest Period End Date: June 19, 2013	
5.	Solicitations Picked up/Downloaded: 108	Bids/Proposals Received: 7
6.	Contract Administrator: Susan Dove	Telephone Number: (213) 922-7451
7.	Project Manager: John Drayton	Telephone Number: (213) 922-5882

A. Procurement Background

This Board action is for a "Best Value" Request for Proposal (RFP) solicitation issued to procure up to 30 new 40' low floor Zero Emission transit buses. The RFP was issued February 2012 in accordance with Metro's Acquisition Policy, and the contract type is Unit Rate, Firm Fixed Price. Twelve amendments were issued during the solicitation phase of this RFP. Three amendments were issued to proposers in the competitive range after receipt of proposals.

- Amendments No. 1 issued March 2, 2012 provided commercial terms modifications and clarifications to solicitation documents.
- Amendment No.2 issued March 14, 2012 provided commercial terms modifications to the solicitation documents, including labor values and provided answers to questions posed by interested parties.
- Amendment No.3 issued March 29, 2012 provided answers to questions posed by interested parties, and modified RFP technical specification requirements and commercial terms.

- Amendment No.4 issued April 20, 2012 provided commercial terms modifications to solicitation documents including a revision to the proposal due date.
- Amendment No.5 issued April 27, 2012 provided answers to questions posed by interested parties, and modified RFP technical specification requirements and commercial terms.
- Amendment No. 6 dated May 11, 2012 provided modifications to the RFP pricing forms.
- Amendment No. 7, dated May 18, 2012, provided clarifications and answers to questions and provided changes in RFP key procurement dates.
- Amendment No 8, dated May 29, 2012, revised the proposal due date.
- Amendment No. 9, dated June 12, 2012, provided a sample invoice form.
- Amendment No. 10, dated June 13, 2012 provided modifications to RFP key dates, and commercial terms.
- Amendment No. 11, dated January 30, 2013 provided modifications to RFP key dates, and a modified RFP technical specification requirements and commercial terms.
- Amendment No. 12, dated February 5, 2013 provided modifications to RFP key dates, and commercial terms.
- Amendment No. 13, dated April 30, 2013 invited proposers in the competitive range to submit best and final offers.
- Amendment No. 14 dated May 2, 2013 provided clarifications to Proposers in regards to the pricing sheet.
- Amendment No. 15, dated May 3, 2013, provided clarifications to proposers.

A total of seven proposals were received on June 22, 2012. Five proposals were received in response to the Zero Emissions Bus technical specification. One proposal was received in response to the Super Low Emissions Bus technical specification. An alternate proposal was also received, but it was not evaluated as part of this procurement.

B. Evaluation of Proposals/Bids

Three firms did not meet the minimum qualifications of the solicitation and were not considered for further evaluation. One firm did not provide the required documentation to thoroughly evaluate the proposal; therefore its proposal was deemed non-responsive. A total of three proposers were evaluated and determined to be in the competitive range. A Source Selection Committee (SSC) consisting of staff from Vehicle Technology, Bus Operations Maintenance, Service Planning was convened and conducted a comprehensive technical evaluation of the proposals received. The SSC also consisted of experts in the area of advanced transit technologies and project management. The SSC also held direct interviews with each responsive and responsible Proposer and performed manufacturing and engineering site surveys to fully assess the Proposers' capabilities, capacities, strengths and weaknesses.

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

Evaluation Criteria	Weight
Life Cycle Costs	30%
Technical Compliance	25%
Local Jobs	20%
Project Management Experience	15%
Experience and Past Performance	10%

The evaluation criteria are appropriate and consistent with criteria developed for similar bus procurements. Several factors were considered when developing these weights, giving the greatest importance to Life Cycle Costs and Technical Compliance to ensure that the proposed vehicle meets all of the functional and performance requirements described in the technical specification, while providing the best overall value to Metro. Since this project is state and locally funded, it was determined that including an evaluation criterion for Local Jobs Employment was appropriate.

The SSC conducted interviews and performed manufacturing site visits. The firms' project managers and key proposed team members had an opportunity to present qualifications and respond to the evaluation committee'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, manufacturing plans, schedules and perceived project issues. Each team was asked questions relative to each firm's proposed staff, capability, manufacturing capacity, facility development, new job training, job creation and previous experience implementing its proposed manufacturing plan. The three responsive, responsible proposers deemed to be within the competitive range are listed below.

Qualifications Summary of Firms within the Competitive Range:

BYD

BYD was founded in 1995. BYD is the largest supplier of rechargeable batteries in the world and has the largest market share for Nickel-cadmium batteries, handset Li-ion batteries, cell-phone chargers and keypads worldwide. It is the largest supplier of rechargeable batteries, and it also has the second largest market share for cell-phone shells in the world. BYD's most recent transit bus clients include Hertz USA, Long Beach Transit and Stanford University.

BYD was the highest rated Best Value Proposer. BYD's proposal strengths include: lowest capital price, and the highest rating in technical capability, past performance, project management and local job commitment.

DesignLine

DesignLine Corporation is headquartered in Charlotte, North Carolina. DesignLine is a manufacturer of coach, electric and range-extended electric (hybrid) buses. DesignLine was founded in 1985 and began producing hybrid city buses in the late 1990s. DesignLine currently operates its electric vehicles in Denver, Colorado and Charlotte International Airport.

Proterra

Proterra, headquartered in Greenville, South Carolina, was founded in 2004. Proterra has delivered full-size transit vehicles that meet California's Zero Emissions Bus Rules as recognized by the California Air Resources Board (CARB). Proterra's electric vehicles are currently operated in San Antonio, Texas and Denver, Colorado and Pomona, California.

1	FIRM	Average Score	Factor Weight	Weighted Average Score	Rank
2	BYD				
3	Life Cycle Cost	84.68	30.00%	25.40	
4	Technical Compliance	71.61	25.00%	17.90	
5	Local Jobs Plan	100.00	20.00%	20.00	
6	Project Management Experience	73.46	15.00%	11.02	
7	Experience and Past Performance	72.60	10.00%	7.26	
8	Total		100.00%	81.58	1

9	DesignLine				
10	Life Cycle Cost	100.00	30.00%	30.00	
11	Technical Compliance	69.61	25.00%	17.40	
12	Local Jobs Plan	82.87	20.00%	16.57	
13	Project Management Experience	57.53	15.00%	8.63	
14	Experience and Past Performance	53.95	10.00%	5.40	
15	Total		100.00%	78.00	2

16	Proterra				
17	Life Cycle Cost	62.03	30.00%	18.61	
18	Technical Compliance	63.69	25.00%	15.92	
19	Local Jobs Plan	88.09	20.00%	17.62	
20	Project Management Experience	57.97	15.00%	8.70	
21	Experience and Past Performance	56.40	10.00%	5.64	
22	Total		100.00%	66.49	3

C. Price Analysis

The recommended price has been determined to be fair and reasonable based upon adequate price competition, and award to the lowest proposed price offeror. Metro also performed fact finding, technical evaluation, independent cost estimate and discussions. The price is 14% lower than the Independent Cost Estimate (ICE). The recommended awardees' price for 30 vehicles is \$2.4 million or 9.3% lower than the next lowest offer.

	Bidder/Proposer Name	Initial Proposal for 30 Buses	Negotiated BAFO for 30 Buses
1.	BYD	\$27,105,370	\$25,336,686
2.	DesignLine	\$34,241,611	\$27,699,847
3.	Proterra	\$33,324,577	\$32,424,548

Note: Award recommendation is for only 25 buses. The life cycle cost for 30 buses was used for proposal evaluation purposes.

Life Cycle Cost

Metro calculated all identified life cycle cost impacts against a baseline of a standard Metro 40' CNG bus. Price scoring for evaluation purposes was based on the ratio of the operating cost for a standard CNG bus divided by the estimated life cycle cost per seat mile for each proposed vehicle.

Specific costs defined in the life cycle costs calculation included:

- Range between fueling/charging
- Seating Capacity
- Fueling/Energy Costs
- Weight
- Replacement Component Costs
- Speed
- Other factors (anticipated maintenance costs and other factors)
- Purchase price
- Maintenance Costs (Scheduled and Unscheduled)
- Infrastructure costs
- Energy Storage costs
- Fuel Costs

The seat per mile for each proposed bus is listed below:

<u>Proposer</u>	<u>Cost per Seat Mile</u>
BYD	13.7 cents per seat mile
Design Line	11.8 cents per seat mile
Proterra	18.7 cents per seat mile

I. D. Background on Recommended Contractor

The recommended firm, BYD North America is headquartered in Los Angeles, CA. BYD North America also has a facility in Lancaster, California. BYD has been in business for 18 years and is a leader in the field of battery technology and electric bus vehicles. BYD is the largest supplier of rechargeable batteries in the world, and has the largest market share for nickel-cadmium batteries, handset li-ion batteries, cell-phone chargers and keypads worldwide BYD's most recent clients include Long Beach Transit and Stanford University.

BYD's Project Manager has extensive bus experience in the U.S. and China. He has over nine years' experience including his position as a lead design engineer. He is currently BYD America's, New Business Development Manager overseeing BYD's U.S. Market Division.

E. Small Business Participation

Metro's Small Business Enterprise (SBE) requirement established for this procurement requires proposers to develop and submit an SBE Plan, which must include an established overall SBE goal. The recommended awardee, BYD established an overall SBE goal of 5% and identified subcontracting opportunities, as described in its SBE Plan. BYD's efforts to meet the overall goal will be monitored throughout the life of the contract.

ZERO EMISSIONS BUS CONTRACT FUNDING/EXPENDITURE PLAN

In Thousands	FY14	FY15	FY16 +	Total	% of Total
Uses of Funds					
Acquisition	6,000,000	6,000,000	8,739,250	20,739,250	69.1%
Professional Services ¹	250,000	250,000	3,500,000	4,000,000	13.3%
Labor	300,000	300,000	300,000	900,000	3.0%
Travel	150,000	150,000	100,000	400,000	1.3%
Spare Parts ²	250,000	250,000	1,386,825	1,886,825	6.3%
Contingency			2,073,925	2,073,925	6.9%
Total Project Cost	6,950,000	6,950,000	16,100,000	\$30,000,000	100%
In Thousands	FY14	FY15	FY16 +	Total	% of Total
Sources of Funds					
Measure R 35% ³	6,950,000	6,950,000	16,500,000	\$30,000,000	
Total Project Funding				\$30,000,000	100%

1. Includes \$3.5 million in funding to cover estimated expenses for converting six existing gasoline hybrid buses to *super low emission configuration*.
2. Includes \$1.2 million in funding to cover estimated expenses for acquiring high voltage "Fast Charging" equipment.
3. Initial source of funds plans for Measure R 35%. Staff will apply other local, state or federal sources as they become available/applicable to project uses.



Metro

Los Angeles County
Metropolitan Transportation Authority

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Los Angeles, CA 90012-2952

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metro.net

ATTACHMENT C

OP4

**OPERATIONS COMMITTEE
June 16, 2011**

SUBJECT: SUPER LOW / ZERO EMISSION BUS PROGRAM

ACTION: AUTHORIZE SOLICITATION FOR ADVANCED 40' BUSES

RECOMMENDATION

- A. Authorize the Chief Executive Officer and the Advanced Transit Vehicle Consortium (ATVC) to solicit a Best Value Request for Proposal (RFP) for award of one or more contracts to purchase up to 30 Super Low/Zero Emission Buses as a competitive negotiation pursuant to PCC § 20217 and MTA's Procurement Policies and Procedures.
- B. As part of this RFP for Super Low/Zero Emission Buses, authorize staff to include RFP terms and conditions evaluation criteria and proposal submittal requirements designed to create employment opportunities in Los Angeles County.

ISSUE

By June 2012, the California Air Resources Board (CARB) is scheduled to issue renewed guidance requiring the procurement of zero emission buses (ZEB) for public transit operators. At this time, many ZEB technologies are immature, prohibitively expensive and/or unreliable and unsuitable for daily transit service. This procurement is intended to help foster new developmental ZEB technologies, and to increase MTA operation's exposure to these advanced technologies. Several advanced technology propulsion systems are expected to be considered as part of this procurement, potentially including vehicles using fuel cells, batteries, or other advanced electric-hybrid systems. It is likely that two or more different technical approaches will be demonstrated as part of this procurement.

At the March Board Meeting, staff was directed by the Board to “Develop a recommended strategy and timeline, subject to future review and approval by the MTA Board, for transitioning to super low/zero emission buses.” In response to this direction, last month the Advanced Transit Vehicle Consortium (ATVC) adopted a resolution to initiate an RFP for up to 30 super low emissions/zero emission buses, and the ATVC Board asked that these procurement plans be brought back to the MTA Board for concurrence.

DISCUSSION

The ATVC action authorizes the initiation of a new competitive solicitation for 40' transit buses as described in PCC §20217. Between FY12-FY15, MTA and ATVC have been directed by the Board to procure ZEB/SLEB buses to replace buses that will reach the end of their useful life during this period. Part of ATVC's action included direction to potentially consider multiple awards, and to return to the ATVC and MTA Board with alternative procurement scenarios if appropriate (i.e. such as larger quantities of vehicles if required to reach economies of scale).

The use of a “Best Value” competitive negotiation process will provide for consideration of such factors as;

- Broadest possible range of competing technologies, products and materials available
- New Technology Propulsion Systems with Significant Emissions Reduction/Benefits
- Fitness of purpose
- Performance reliability
- Manufacturer's warranty
- Support logistics
- Other similar factors in addition to price in the award of these contracts.

Utilization of this process for this procurement will also permit discussions with the proposers to evaluate the performance and reliability of the proposed components, warranty factors, cost data and delivery time tables to determine the bus most suited for MTA's needs.

Staff does not recommend using a conventional low-bid procurement approach. Using a “Low Bid” procurement approach would not be suitable for considering design, engineering, and advancements in technology and manufacturing requirements associated with producing advanced lightweight vehicles.

As part of this solicitation, staff intends to quantify the value of advanced technology ZEB and SLEB vehicles. The intent of this procurement is to provide MTA with vehicles that exceed all current emission requirements. It is expected that proposers may submit

vehicles powered by hydrogen fuel cells, battery electric propulsion systems, as well as advanced ICE.

If this item is approved, staff plans to initiate a solicitation within 60 days. The procurement process is expected to be conducted during this summer/fall, and an award recommendation would be expected shortly after the end of this calendar year. It is expected that aside from the propulsion systems, this procurement would be for conventional 40' buses. At this time it is unknown how quickly vehicles would be produced under this contract, but it is expected that vehicles would be delivered and put into service between FY12-FY15.

Routine replacement of bus fleet rolling stock is a normal part of MTA's operation. Use of a negotiated procurement approach for these acquisitions helps ensure that vehicles procured are best suited for MTA's operational requirements. These buses are also expected to serve as a demonstration for new technologies that can provide future emission benefits for our fleet.

The use of a Local Jobs Program in the RFP submittal requirements and evaluation criteria would allow staff to create incentives for revenue vehicle manufacturers to consider developing design, manufacture and assembly jobs in Los Angeles County. A recent determination by the Federal Transportation Agency (FTA) prohibits the use of local preference incentives in a federally funded program.

FINANCIAL IMPACT

Funds required to issue this procurement are included in the FY12 budget cost center 3320 Vehicle Technology in project 306002, Operations Maintenance. Once this solicitation is completed, staff will return to the Board to authorize the contract award and establish a life-of-project budget for these buses.

Impact to Budget

The source of funds for the buses will be identified at time of contract award. Most likely they will be funds eligible for bus and rail operations and capital. Preliminary funding plans for this contract(s) include a combination of local funds, including MR35 Clean Fuel and TDA4 funding during FY13, FY14, and FY15 at approximately \$10 million each year.

The final decision and commitment to buy buses will be made after the solicitation is complete and the total cost of the buses is known. If this action is approved, funding for this procurement would then be identified and committed as part of the annual update of the FY12-FY15 Capital Program and Ten Year Forecast. The Chief Operating Office and the Project Manager will be responsible for budgeting future year costs for the life of the project.

ALTERNATIVES CONSIDERED

Staff considered not proceeding with the purchase of these buses at this time. This alternative is not recommended as deferring the purchase of these new vehicles would delay the transition to ZEB requested by the Board and continue operation of conventional CNG bus technologies. It is expected that this action will help foster accelerated develop of low emission technologies that may be used for the MTA bus fleet in the future.

A second alternative considered by staff was to use a “low-bid” procurement approach rather than procuring these vehicles using a negotiated procurement. A low-bid procurement approach is not recommended due to the technically sophisticated nature of these vehicles.

A third alternative considered was to use Federal funding sources for this contract. By electing to use local funding sources, staff has the option of including local preferences as a consideration in any contract award(s).

Staff also considered purchasing larger 45' or 60' buses. At this time, staff has determined that MTA's bus fleet has enough articulated 60' and 45' composite buses to effectively cover MTA's highest ridership lines that require larger vehicles.

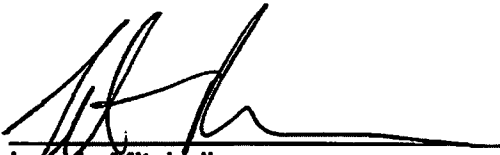
NEXT STEPS

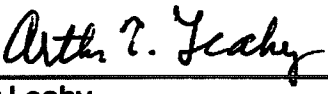
If this action is approved, staff would proceed with a new Best Value solicitation for 40' buses.

ATTACHMENTS

- A: Motion by Directors Villaraigosa, Knabe, Antonvich
- B: ATVC Board Action Approving RFP for 30 Buses

Prepared by: John Drayton
Manager of Vehicle Technology, Los Angeles Metro
Executive Vice President, Advanced Transit Vehicle Consortium

For 
Lonnie Mitchell
Chief Operations Officer


Arthur Leahy
Chief Executive Officer

FINANCE AND BUDGET COMMITTEE
MARCH 16, 2011
OPERATIONS COMMITTEE
MARCH 17, 2011

F&B5

**MOTION BY DIRECTORS VILLARAIGOSA, KNABE AND
ANTONOVICH**

Super Low/Zero Emission Bus Program

The Los Angeles County Metropolitan Transportation Authority (MTA) was a pioneer in moving its bus fleet to cleaner alternative fuels and continues to be a national leader, with the largest fleet of compressed natural gas (CNG) buses in the U.S. and a 100% CNG fleet.

This transition from diesel to CNG buses was not made for economic or business reasons.

It was known and it is the case that the transition would cost MTA more than continuing with a diesel fleet through higher vehicle costs and new fueling infrastructure.

Instead, the MTA Board made this transition for public policy reasons, namely to reduce emissions (particulate matter, nitrous oxides, and sulfur oxides) and improve public health.

The MTA Board decided to make an investment in cleaner air for the residents, workers, and visitors of Los Angeles County and the South Coast air basin.

Since MTA started buying CNG buses there has been a growing focus on reducing greenhouse gases (GHG) as well.

Today, emerging technologies offer the hope of super low or zero emissions, including electric, fuel cell, and hybrid buses.

However, buses featuring these technologies have a number of challenges for operating agencies like MTA, including limited in-service experience, relative higher vehicle acquisition costs, and potential additional infrastructure costs.

On the other hand, these newer buses may reduce operating and maintenance costs and lower life cycle costs than our current fleet.

As a matter of public policy, MTA should continue to be on the forefront of deploying lower emission buses, but we should do so in a fiscally and operationally prudent manner.

I THEREFORE MOVE that the MTA Board direct the CEO to develop a recommended strategy and timeline, subject to future review and approval by the MTA Board, for transitioning to super low/zero emission buses.

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ADVANCED TRANSIT VEHICLE CONSORTIUM

Los Angeles County Metropolitan Transportation Authority
800 Lyon Street, MS 30-2-1
Los Angeles, CA 90012

2**Board of Directors:**

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Metro Board Member and
Supervisor, Fifth District
Los Angeles County and
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S.C.A.G. M.D.

Dr. William Barko
Chief, South Coast Air Quality
Management District

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President:

Richard Hunt
General Manager, Labor and
Employee Relations
Los Angeles Metro

Executive Vice President:

John Drayton
Manager, Vehicle Technology
Los Angeles Metro

Chief Financial Officer:

Joelle Klocoski
Controller
Los Angeles Metro

April 20, 2011

TO: **ATVC BOARD OF DIRECTORS**FROM: For JOHN DRAYTON SUBJECT: **PROCUREMENT OF ZERO EMISSION BUSES**

At the March 2011 Operations Committee meeting, the Metro Board of Directors recommended a separate RFP that would be released simultaneously to this Best value RFP to obtain up to 30 zero emission revenue vehicles that can be assessed as a pilot prototype program

RECOMMENDATION:

A. The ATVC Board finds that the procurement of forty-foot (40') Zero Emission Transit Buses under Public Utilities Code § 130232 does not constitute a procurement method adequate for MTA's needs. The Board hereby authorizes procurement of these 40' advanced transit buses pursuant to Public Contracts Code (PCC) §20217 for procurement by competitive negotiation.

Requires Two-Thirds Vote

B. Authorize the Chief Executive Officer (CEO) to solicit a Best Value Request for Proposal (RFP) for a contract to purchase up to 10 advanced transit buses, with Options for up to an additional 20 buses, as a competitive negotiation pursuant to PCC § 20217 and MTA's Procurement Policies and Procedures.

C. Authorize staff to include RFP terms and conditions, evaluation criteria and proposal requirements designed to create employment opportunities in Los Angeles County if permitted by the project funding source.

ISSUE

This action authorizes the initiation of a new competitive solicitation for forty-foot (40') zero emission transit buses as described in PCC §20217. Between FY12-FY14, MTA will procure a base order of 10 zero emission buses to replace buses that will reach the end of their useful life during this period. The 20 option vehicles in this order would provide to purchase additional replacement vehicle if required.

The use of a "Best Value" competitive negotiation process will provide for consideration of such factors as:

- The use of innovative new technologies
- The use of competing products and materials
- Fitness of purpose
- Manufacturer's warranty
- Vendor financing
- Performance reliability
- Standardization Life cycle costs
- Delivery timetables
- Support logistics
- Other similar factors in addition to price in the award of these contracts.

Utilization of this process for this procurement will also permit discussions with the proposers to evaluate the performance and reliability of the proposed components, warranty factors, cost data and delivery time tables to determine the bus most suited for MTA's needs.

Staff does not recommend using a conventional low-bid procurement approach. Using a "Low Bid" procurement approach would not be suitable for considering design, engineering, advancements in technology and manufacturing requirements associated with producing advanced lightweight vehicles.

As part of this solicitation, staff intends to quantify various approaches to achieving a Zero Emission Bus for transit operations. The California Air Resources Board (CARB) has identified three different approaches for reaching a ZEB standard: fuel cells, battery-electric, and electric trolley-bus. This solicitation will consider any of these approaches, and will identify the approach that offers the most cost effective ZEB in terms of vehicle cost, life cycle operating cost, and facility costs. This procurement will also consider technical approaches that qualify as "Super Low Emission" vehicles, compared to current emission standards.

ALTERNATIVES CONSIDERED

Staff considered using a "low-bid" procurement approach rather than procuring these vehicles using a negotiated procurement. A low-bid procurement approach is not recommended due to the technically sophisticated nature of these vehicles.

FINANCIAL IMPACT

Funds required to issue this procurement are included in the FY12 budget in projects 201060 and 306002, Cost Center 3320 Vehicle Technology. Once this solicitation is completed, Staff will return to the Board to authorize the contract award and to establish a life-of-project budget for these buses.

Impacts to Bus and Rail Enterprise Fund Operating and Capital Budgets

The source of funds for the buses will be identified at the time of contract award. Most likely they will be funds eligible for bus and rail operations and capital.

Funding for these buses is included in MTA's adopted Long Range Plan and Ten-Year Financial Forecasts. The final decision and commitment to buy buses will be made after the solicitation is complete and the total cost of the buses is known. If this action is approved, funding for this procurement would then be identified and committed as part of the annual update of the FY12-FY14 Capital Program and Ten-Year Forecast. The Chief Operating Officer and the Project Manager will be responsible for budgeting futures year costs for the life of the project.

NEXT STEPS

If this action is approved, this recommendation will be forwarded to the MTA Board of Directors for their review and concurrence. If the MTA Board concurs with this action, staff will proceed with a new Best Value solicitation for 40' zero emission buses.

Attachment - Villaragosa/Knabe/Antonovich Motion

Copies: **Art Leahy**
 Paul Taylor
 Lonnie Mitchell
 Richard Hunt
 Alex DiNuzzo
 Mike Stange
 John Roberts