

# ADVANCED TRANSIT VEHICLE CONSORTIUM

Los Angeles County Metropolitan Transportation Authority  
One Gateway Plaza  
Los Angeles, CA 90012

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November 29, 2017

9:00 am

## RECAP of Proceedings

### Regular Board Meeting ATVC Board of Directors

LACMTA Headquarters  
One Gateway Plaza  
3rd Floor Board Room

Called to Order at: 9:13 a.m.

#### Directors/Alternates Present:

Borja Leon (Chair)  
John Fasana  
Ara Najarian  
Dave Perry

#### Officers

James T. Gallagher, President  
Jesus Montes, Interim Executive Vice  
President  
Donna Mills, Chief Financial Officer  
Michelle Jackson, Board Secretary

1) APPROVED minutes of Board Meeting held September 6, 2017

BB	DP	BL (CHAIR)	JF	AN	
A	Y	Y	Y	Y	

2) RECEIVED ATVC President's Report

- a) Status of Projects (ZE Procurements)
- b) Status of Implementation of Near Zero CNG Engines
- c) Consultant Services for Master Plan
- d) Utility Service Collaboration
- e) Electrification of Alignments
- f) Emerging Matters

BB	DP	BL (CHAIR)	JF	AN	
A	P	P	P	P	

Responding to questions from the Board regarding who is farthest along in this process, what happens during a power outage, and if any federal legislation is anticipated to standardize charging methods, staff responded that there will be a need for portable generators; China and Europe are slightly ahead as China replaces their buses every 8 years vs. our replacement schedule of every 12 years; Zebra Group is sharing information on a policy level with Sunline and Norwalk, but there is no decided leader at this time.

Long term we will need to consider how service will be provided under abnormal conditions, facility modification costs and a full strategic plan sequencing things.

Director Leon requested a report in January on emerging technology for infrastructure and bus.

3) RECEIVED Presentation by ZE OEM's

BB	DP	BL (CHAIR)	JF	AN	
A	P	P	P	P	

BYD uses AC charging standards; noted AVTA going full zero emission by 2018 and Indianapolis achieving 300 mile range next year.

Green Power Motors announced EV550 with 100 seats and a 220 mile range for the same cost as diesel and extremely quiet.

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BB = B. Benoit	DP = D. Perry	BL = Borja Leon	JF = J. Fasana	AN = A. Najarian
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LEGEND: Y = YES, N = NO, C = CONFLICT, ABS = ABSTAIN, A = ABSENT, P = PRESENT

(Item 3 – continued from previous page)

LAUSD currently testing a school bus at a cost of \$300,000 (same size transit bus would cost twice as much. Using J1772 SAE charging protocol, which will charge in two hours, and charge any equipment.

Tesla is testing liquid cooled charging and tiny solid state batteries which can be cut or pierced and continue to work. They are much safer. This is what's on the horizon. Director Leon requested that an update on the solid state battery be included in the report in January if possible.

New Flyer indicated that fuel cells are still a viable option, especially for Division 8 which has hydrogen nearby. They noted that they look at it as an onboard charging system. OCTA and AC Transit still have fuel cell buses, which charge in just a few minutes. The cost is \$900,000 per bus on an order of 100. Excelsior J1772 chargers are being used on the Orange Line with a 300kw hour range. This charger works for cars and buses. Currently being used for on-route charging on the Orange Line.

Director Fasana asked about weight and status of composite bus shells at the New Flyer facility. New Flyer responded that Excelsior has composite parts, but they don't currently have a fully composite bus. Weight distribution is the most important issue.

Proterra is making composite buses for Foothill Transit. Uses J772 CCS fast route overhead charging and can get a range of up to 660kw hours. One vehicle went 1,100 miles without charging. It has two times the horsepower of a standard bus and more power for climbing hills. Feels on-route charging is on the way out; looking to integrate solar for future charging.

4. CONSIDERED items not on the posted agenda:

Director Leon requested that the next ATVC meeting be scheduled in January or February at the Los Angeles Cleantech Incubator.

BB	DP	BL (CHAIR)	JF	AN	
A	P	P	P	P	

4) ADJOURNED at 10:28 a.m.

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