

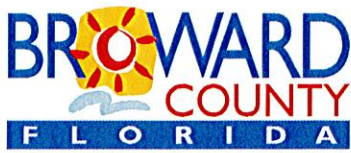
**ITEM #53**

**ADDITIONAL MATERIAL**

**Regular Meeting  
OCTOBER 23, 2018**


**SUBMITTED AT THE REQUEST OF**

**TRANSPORTATION DEPARTMENT**



**TRANSPORTATION DEPARTMENT/ Administration**

1 N. University Drive, Suite 3100A • Plantation, Florida 33324 • 954-357-8300 • FAX 954-357-8305

Date: October 22, 2018  
To: Broward Board of County Commissioners  
From: Chris Walton, Director, Transportation Department   
Subject: Additional Information for Supplemental Agenda Item 53, concerning BYD Electric Buses

This memorandum provides additional information for Supplemental Agenda Item 53 concerning BYD electric buses.

On June 12th, 2018, item 31A, the Board approved a \$4.6 million contract for five BYD over-the-road 45-foot electric buses funded by a \$1 million 2017 Federal Transit Administration (FTA) Low or No (Low-No) Emissions discretionary grant and our annual FTA formula grant. On October 9th, 2018, item 45, the Board approved a \$13.1 million piggyback contract with the State of Georgia for 15 BYD 40-foot electric buses funded by a \$2.25 million 2018 FTA Low-No Emissions discretionary grant and our annual FTA formula grant. BYD was the approved FTA bus manufacturer under each of the two FTA Low-No discretionary grants.

The following provides a summary of information.

- The Los Angeles Metro (LA Metro) BYD electric buses discussed in the Los Angeles Times story were built in 2014 and put into service in 2015 as a demonstration project. These five buses were the first electric buses built by BYD in the United States. The problems experienced with these buses were real, but not unexpected with the implementation of new technologies.
- LA Metro is one of the largest transit systems in the nation and they have a significant research and development organization that manages demonstration projects and the implementation of new technologies. Their staff reported that they viewed this initial BYD electric bus project as an opportunity to learn and apply those lessons to future bus purchases.
- As a result of the initial demonstration project and the lessons learned, LA Metro is proceeding with two new electric bus projects with BYD. They have placed orders for

an additional 60 BYD 40-foot electric buses and 5 BYD 60-foot articulated electric buses demonstrating LA Metro's willingness to continue with the development of these new technologies with BYD.

- BCT staff reached out to other agencies currently using BYD electric buses to find out about their experiences. The Denver Regional Transit District (RTD) has 36 BYD electric buses that have been in operation for approximately two and a half years and their staff reports that they have not experienced unusual issues with the manufacture of the buses. They cited warranty issues that could be expected with any new diesel or electric bus. Information concerning the quality of bus manufacturing was also received in discussions with the Antelope Valley Transit Authority (AVTA) in California and SunLine Transit in Thousand Palms, California. They reported similar results and did not have significant issues related to the manufacturing of their BYD electric buses.
- BCT has tested two BYD electric buses. The first one was driven in revenue service for 9 days during the hot summer months, between August 22<sup>nd</sup> and September 22<sup>nd</sup> of 2017, with one front door failure. The second was driven on October 27, 2017, with a fully seated load and traveled from BCT's Copans Operations & Maintenance Facility in Pompano Beach, to the Government Center West in Plantation and then on an Express Route from the BB & T Center in Sunrise to downtown Miami and back. The bus performed very well.
- Through September 2018, BYD has delivered more than 270 electric buses in North America with another 300 buses on order. They have built a new 450,000 square foot manufacturing plant in Lancaster, California and their electric buses meet all federal "Buy America" requirements.

Last month, I attended a Zero Bus Emissions Conference in LA. The battery range of electric buses is a primary concern of the transit industry. Transit systems nationally are not achieving the published ranges of the battery electric bus manufacturers. Any emerging technology will have issues during the early stages of implementation and the transit industry is working together and sharing information and experiences. Electric buses have significant long-term benefits and lessons learned are being applied to each new project. After this conference, I stayed an extra day and met with LA Metro staff and they expressed no concerns about moving forward with BYD and their electric bus program.

C: Bertha Henry, County Administrator  
Monica Cepero, Deputy County Administrator  
Gretchen Cassini, Assistant County Administrator  
Andrew Meyers, County Attorney  
Robert Melton, County Auditor  
George Tablack, Director, Finance & Administrative Services  
Brenda Billingsley, Director, Purchasing Division