



TPB REGIONAL PUBLIC TRANSPORTATION SUBCOMMITTEE

Virtual Meeting Summary: July 28, 2020

ATTENDEES

Charley Dingboom, WMATA (Chair)	David Koch, DDOT	Rachel Healy, WMATA
Martin Barna, DASH	David Miller, FITP	Kate Roetzer, WMATA
Jamie Donovan, DCDOEE	Jamall Schooby, FITP	Jeff King, COG
Jennifer, DCDOEE	Sonali Soneji, VRE	Andrew Meese, TPB
Alex Lopez, DCDOEE	Deanna Archey, MCDOT	Eric Randall, TPB
Wendy Klancher, DFHV	Mike Nessel, MCDOT	Nicole McCall, TPB
Jim Maslanka, Alexandria	Taski Shurgoe, Fairfax Co	James Li, TPB
Dan Goldfarb, NVTC	Malcolm Watson, Fairfax Co	Joe Davis, TPB
William Jones, ART	Tom Reynolds, Fairfax Co.	Erin Morrow, TPB
Carrie Waters, Frederick	Carrie Giles, ICF	Sarah Bond, TPB
Erik Belmont, DDOT	Melissa Chou, WMATA	Tim Canan, TPB
Anthony Foster, Prince George's	Darin Welt, WMATA	Arriana Koudanas, TPB
James Turner, Prince George's		

AGENDA

1. **WELCOME AND INTRODUCTIONS**, *Charley Dingboom, Chair*
 - Call to order and introductions.
2. **ELECTRIC BUS ROUNDTABLE**
 - a. *Frederick County / TransIt, Carrie Waters*
 - Initial e-bus deployment was 5 buses reconditioned from CCW (Complete Coach Works). At the time, TransIt had 2 hybrid buses, and a decision was made to move towards an all-electric fleet. The CCW buses are typically operated in the AM and PM peaks, for about 3.5 hours
 - TransIt then procured new buses, which arrived from BYD in October 2019. Some issues in preparing for operation delayed their deployment until this spring. Another three buses have arrived this June and are in preparation for service. A \$1.5 million FTA No-Lo grant provides some of the funding for this procurement.
 - Key lessons learned are the necessity of good communications with the manufacturer and with drivers.
 - b. *Montgomery County / Ride On, Mike Nessel, Operations Chief*
 - Ride On has 4 e-buses from ProTerra, now based at the Silver Spring depot. In service on Route 18 and Route 25, peak service only, with the buses recharged overnight. A FTA No Lo grant also helped fund these buses

- An RFP is out for another 10 buses. By 2030, expect to have 70 e-buses in service. Part of the key work is getting the depot electrical connections ready. Ride On e-buses will have overhead charging. The development of procurement specifications has been very methodical.
 - The e-buses are operated through a P3 effort, with Alpha Structures providing some of the service support.
 - Lessons learned: cooling the buses using A/C can take the same power as 100 minutes of driving. A new practice is to cool them while still on the charger.
 - Ride On is participating in the Zero Emission Bus Resource Alliance (ZEBRA) group, which arose out of the TIGGER efforts.
- c. Prince George's County / The Bus, *Anthony Foster & James Turner*
- Prince George's is still procuring e-buses, and is interested in sharing information. Also looking at overhead charging for future buses, using a pantograph.
- d. DDOT / DC Circulator, *Erik Belmont*
- Circulator has 14 ProTerra e-buses in service. E-buses were introduced as a pilot concept in 2017.
 - Part of the initial effort was identifying a long-term facility location for Circulator. Eventually the DC Streetcar facility was modified to provide for buses.
 - The preparation work for e-buses took longer than expected. Construction started in late 2017 and took until 2018 to be ready.
 - Lessons learned included the following:
 - One issue is that a 55 kW charger is in use, which is not robust enough for all needs.
 - The team hired to monitor ProTerra's manufacture of the vehicles was not very experienced, which led to various issues further down the road.
 - Three critical issues included 1) the heat pumps, which were found to have a sub-manufacturing issue. 2) The power steering, which had a software issue, and almost everything on the bus is software controlled, so systems need to be interoperable included when patched or upgraded. 3) The chargers, which were procured through a third party. Software updates were developed and implemented separately, and it was found did not work with the other systems' software. It took two months to resolve this issue.
 - DDOT was conservative for initial operations and started with a 30% power reserve requirement versus the industry standard of 20%. This was found overly conservative, especially the first winter when the bus power consumption increased. More lessons learned were as that chargers were not always properly plugged in and that bus cabins should be warmed up while still on the charger.
 - A series of protocols were implemented to get through the first winter. These have worked well. The first winter buses had to be withdrawn early 2-3 times a week, while this past second winter, there were only 2-3 times throughout the season. Having a reserve policy of 20% also helped though
 - So a final lesson learned is to closely analyze power consumption, by unit and every other measure. HVAC consumption takes a lot of energy, and a tipping point seems to be reached when outside temperatures fall into the 30F-40F range. But other factors can also affect energy requirements.
 - Snow had no particular impact on e-bus operations. DDOT is in a new procurement for 14 ProTerra e-buses, with pantograph chargers, which should be faster. There will also be 14 150kW chargers with two dispensers apiece.



- ProTerra owns their database and works with Apex as a data support service. This arrangement needs a close look and review to make sure it's effective.
 - DDOT will also use VW settlement grants to procure another two buses.
 - DDOT is coordinating closely with Pepco on ensuring power to the e-bus charging facilities.
 - A recommendation is to ensure there is additional training beyond that offered by Pro Terra at their Greenville, SC facility. Having on-site support and training is invaluable.
- e. *WMATA / Metrobus, Darin Welt & Rachel Healy*
- WMATA is refining an extensive deployment plan for electric buses. Updates are provided on a WMATA webpage and form part of larger sustainability efforts.
 - Re e-buses, WMATA is working with the utilities on power supply and rate structure. The initial deployment plan calls for 14 buses from multiple manufacturers to be deployed at 2 garages. Proposals are due by the end of this year and expected arrival of the e-buses is 2022. Looking at two 60-foot (articulated) buses and twelve 40-foot (standard) buses. Shepherd Parkway depot will be one location.
 - WMATA must coordinate with new stakeholders in preparing for e-buses. Some 9 MW of power is needed, as much as 6,000 homes, so the electric grid needs to be able to support this load.
 - WMATA procures about a hundred buses a year. Current manufacture rates in the US could not support this delivery rate, but WMATA wants to start now.

Discussion:

- DASH has e-buses on order. Three should arrive in August and another three by the end of the year. Some ProTerra and some New Flyer.
- Arlington has no current e-buses or procurement activity, but it is part of the 2022 plan to procure e-buses.
- Participants were recommended to check out TCRP Report 219 on e-buses.
- Regionally, it was suggested that the COG Rider clause and further communications could enable joint procurements, either of buses or for parts or technical support.

3. UPDATE ON TPB'S TLC PROGRAM AND THE TRANSIT ACCESS FOCUS AREAS, *John Swanson, TPB Planner*

- Item was postponed to a subsequent meeting.

4. UPDATE ON REGIONAL INFORMATION GATHERING REGARDING TRANSIT OPERATIONS AND COVID-19, *Andrew Meese, TPB Systems Performance Planning Director*

- Andy Meese reviewed the Questionnaire on transit recovery from the pandemic shared with the MATOC Transit Task Force. He went over the purpose and the nature of this cooperative effort being led by the Greater Washington Partnership. Attendees were encouraged to touch base with operations folks to assist in providing the requested information.

5. OTHER ITEMS/ADJOURN

- Eric Randall reported that the 2019 State of Public Transportation report is in the final stages of drafting and should be shared with RPTS members for review in August. In addition,



he reminded attendees that the federally-required transit safety targets are scheduled to be presented to the board in September.

- Charley Dingboom adjourned the meeting at 2:00 PM.
- The next meeting is scheduled for September 22, 2020

All meeting materials are available for download from the subcommittee's website:

<https://www.mwcog.org/events/2018/7/24/tpb-regional-public-transportation-subcommittee/>

