

FY24 Ultra Low Diesel Fuel Procurement

MBTA Board of Directors Meeting

August 24, 2023

Jeff Cook

Chief Procurement and Contract Administration Officer



Bus and Commuter Rail make up and steps reducing emissions

Bus

- Commenced in 2010 to introduce lower emission buses (Hybrid) into its fleet, and in 2016/2017 introduced compressed Natural Gas (CNG) buses
- Fleet Currently consists of 1,014 comprised as follows:
 - 175 Buses using Compressed Natural Gas (CNG) producing fewer emissions over gasoline and diesel
 - 834 Buses using Ultra Low Sulfur Diesel Fuel (ULDF)
 - 585 (71%) comprised of Hybrid buses
 - 5 Battery Electric Buses
- In 2023 taking delivery of an additional 160 Enhanced Electric Hybrid buses replacing 2006/07 Diesel fleet

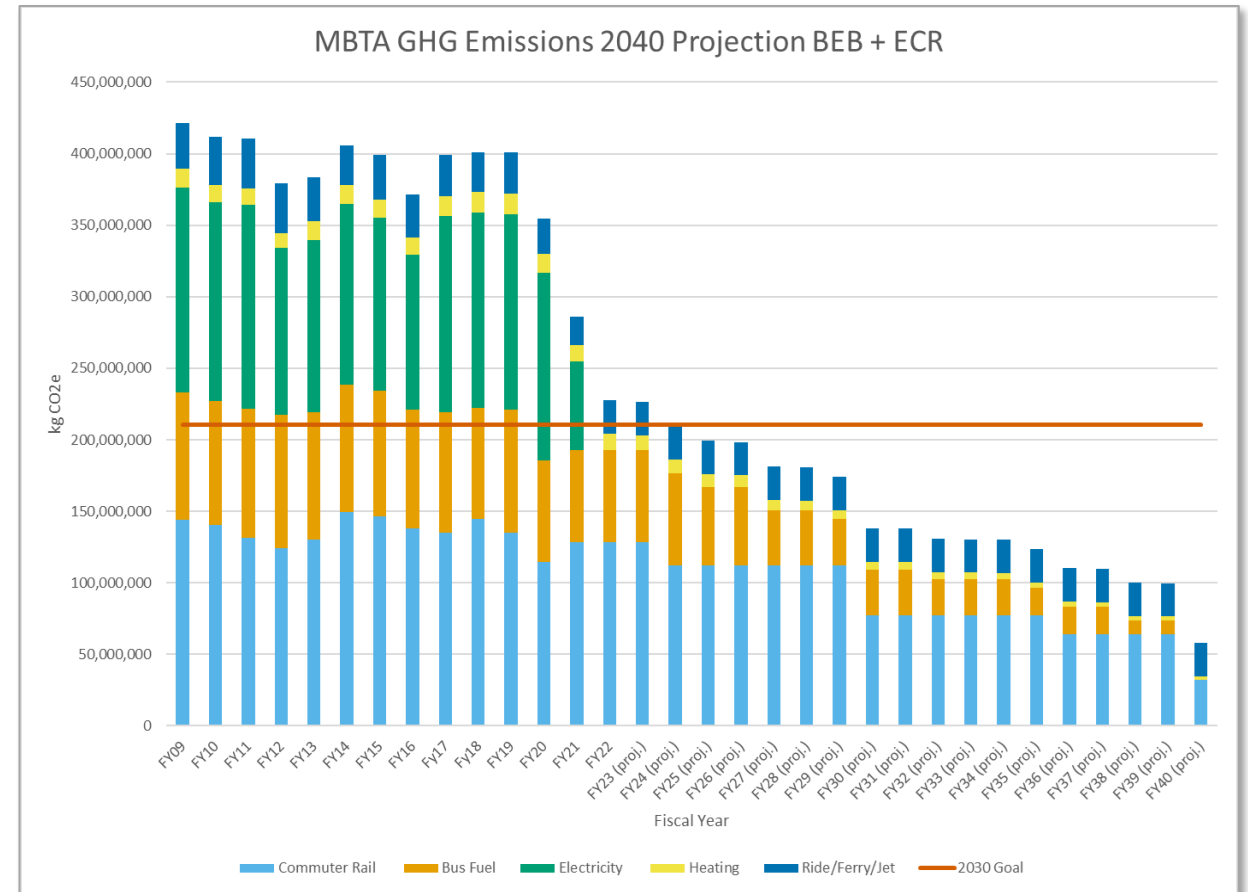
Note: During the July 2023 Board Meeting: 460 Battery Electric Bus award was approved

Commuter Rail

- Over 100 locomotives owned by the MBTA, with most recent being 40 new HSP46 locomotives in 2014-16 were state of the art emissions and fuel economy at the time.

Non-Revenue Vehicles – 50 hybrid F150 delivery by end Sept. 23 and 10 Chevy Bolts ordered.

8/24/2023



Key Bus Electrification Accomplishments

- Created **implementation plan** based on equity, ridership, and fleet and facility condition
- Purchased **599 Burgin Parkway**, completed **100% design** and brought a **Construction Manager** on board for Quincy
- Completed **100% design** for North Cambridge
- **Expanded parking** at Southampton to accommodate larger 60-ft fleet
- Developed **15% design** for Arborway and procured final design
- Conducted **conceptual planning** for Wellington
- Received **\$116M FTA LoNo Award** for Battery Electric Bus procurement
- Selected **battery electric bus manufacturer** for initial contract
- Received **FTA Areas of Persistent Poverty Award** to support planning and design for on-route charging



Diesel Fuel for Commuter Rail and Bus Operations

Background:

- MBTA Commuter Rail and Bus Maintenance utilize the Massachusetts Operational Services Division (OSD) contracts for purchase of Ultra Low Sulfur Diesel fuel (ULSD)
 - ULSD was developed to reduce diesel emissions more effectively and is cleaner–burning diesel fuel that contains 97% less sulfur than low-sulfur (LSD) fuel
- Previous procurements have been conducted through Purchase Orders and previously approved contracts
- At this time, we are seeking approval to enter into a contract with Dennis K. Burke, Inc. for Commuter Rail and Bus requirements through July 31, 2024, which is the end of the current OSD contract

Contract:

- Estimated quantity: 19,725,000 gallons (5,525,000 bus / 14,200,000 commuter rail)
- A fixed differential of \$.0448 per gallon is applied to the low wholesale Boston Price as published daily in the OPIS-Oil Price Daily (based on truckload shipments)
- At estimated fuel prices of \$2.6348 / gallon plus the fixed differential, the estimated contract value is \$52,855,110

Hedging:

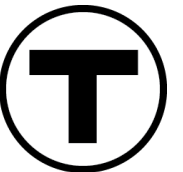
- MBTA Treasury hedges approximately 50% of projected usage through the use of derivative contracts
- The FY24 fuel hedge process was authorized by the MBTA Board of Directors in January 2023
- FY24 hedges are approximately 9.8 million gallons with 4 counterparties at a weighted average price of \$2.6348/gallon



Diesel Fuel for Commuter Rail and Bus Operations

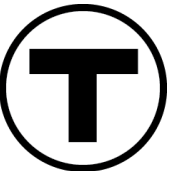
VOTED:

That the General Manager be, and hereby is, authorized to execute in the name and on behalf of the Authority, and in a form approved by the General Counsel, a contract with Dennis K. Burke, Inc. to supply Diesel Fuel on an as needed basis, subject to price in effect at the time of delivery and at a total value of \$52,855,110



MBTA Battery Electric Bus Procurement

Adding selected slides from July 27th board meeting for additional reference



REC Classifications

Various shades of Green



<p>SREC – Solar RECs in Massachusetts. The SREC II program is set to expire in 2026</p>
<p>Class I REC MA Class I represents facilities in service after 1997. Technology includes solar, wind, small hydropower, landfill gas.</p>
<p>Maine Class II REC Typically represents older hydroelectric facilities</p> <p>Vermont Tier I Predominately large hydro including NYPA</p>
<p>CES-E Clean Energy Standard – Expansion represents some nuclear and large hydro located outside of ISO-NE that delivers its power in New England</p>
<p>Green-E Wind, Solar, Geothermal, certain Hydroelectric and certain Biomass electricity-generation technologies can be used in a Green-e® Energy Certified renewable energy product. Not located in New England</p>

Allowing flexibility to the supplier could reduce the cost of the REC





MBTA Battery Electric Bus Procurement

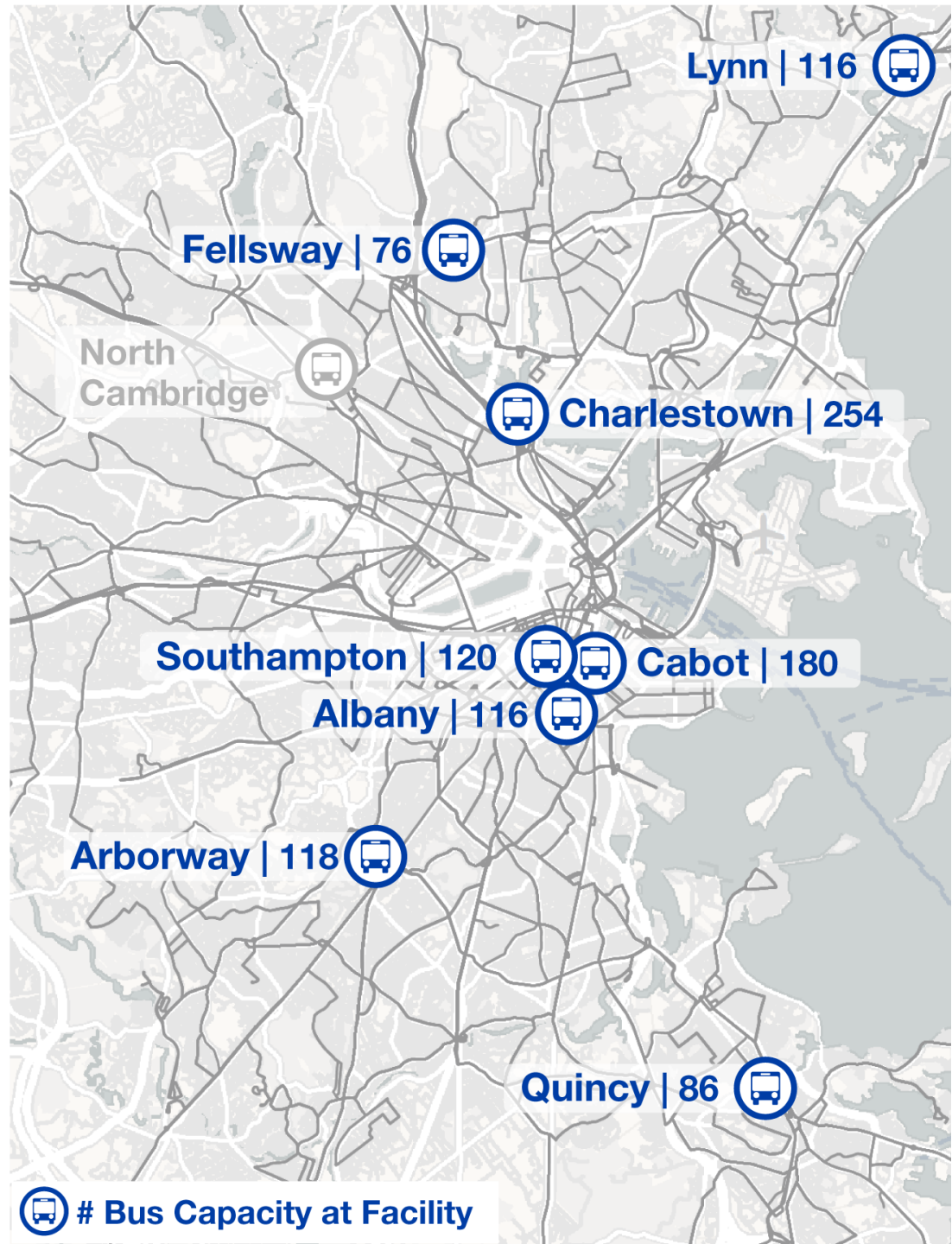
Project Context and Award Vote

July 27, 2023

MBTA Bus Facility Network

Nine maintenance garages house more than **1,000 buses**, with a **limit on expansion** and **zero facilities** that accommodate a full BEB fleet.

- 1904 Quincy Opens
- 1925 Fellsway Opens, Quincy to Bus
- 1936 Lynn Opens
- 1941 Albany Opens
- 1975 Cabot + Charlestown Open
- 1979 North Cambridge Opens (ETBs)
- 2002 Southampton Opens (60-ft only)
- 2003 Arborway (temporary facility)



Driver for Battery Electric Buses

The Massachusetts Climate Law enacted in August 2022 requires MBTA to purchase solely zero emission buses after 2029 and fully electrify fleet by 2040

- BEBs support Commonwealth's Net Zero target by **reducing transportation emissions**
- BEBs have no tailpipe emissions, resulting in **better air quality in the communities** the MBTA serves compared to CNGs or diesel hybrids
- Just like electric cars, BEBs will be **quieter on the road** and when returning to maintenance facilities



Photo by Cait Sith810

Phase 1 Battery Electric Bus Procurement

MBTA is advancing the Bus Electrification Plan with the procurement of Battery Electric Buses

- BEBs will replace the aging 2008-2009 New Flyer Emissions Controlled Diesel (ECD) fleet and the retired 2004 Neoplan Electric Trolley Bus (ETB) fleet
- Vehicle Engineering plans to execute RFP 1F-22 to procure a new fleet of 40-foot Battery Electric Buses (BEB) under Contract No. 1F-22 with New Flyer of America Inc.
- Proposed contract will support the procurement of 80 BEBs. Delivery of this fleet to begin with the arrival of ten pre-production buses in Summer 2024.
- Serial Production bus deliveries of the remaining 70 buses to be coordinated with forecasted opening of North Cambridge (2025) and Quincy (2026) facilities