



**Massachusetts Bay
Transportation Authority**

MBTA Bus Fleet Update / Plans

William G. Wolfgang, MBTA Vehicle Engineering

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Current MBTA Bus Fleet

MBTA bus fleet is currently made up of 922 40-foot and 107 60-foot buses of various propulsion technologies.

Fleet Type	Year	Quantity
Neoplan 40-ft Diesel	2003-04	193
Neoplan 60-ft Dual Mode	2004-06	32
Neoplan 40-ft Electric Trolley	2004	28
New Flyer 40-ft Diesel (base)	2006-07	155
New Flyer 40-ft Diesel (option)	2008-09	155
New Flyer 60-ft Hybrid	2010	25
New Flyer 40-ft Hybrid (option)	2014	60
New Flyer 40-ft Hybrid	2016-17	156
New Flyer 40-ft CNG	2016-17	175
New Flyer 60-ft Hybrid	2016-17	44
New Flyer 60-ft Ext Range Hybrid	2018	1
New Flyer 60-ft Battery Electric	2019	5
New Flyer 40-ft Hybrid*	2019-2020	194

**MBTA Vehicle Engineering is in-process of taking delivery of this fleet*



Life of an MBTA Bus



New Bus Costs (approx.) *	
Diesel	\$650k
Hybrid	\$750k
CNG	\$700k
BEB	\$850k

*Note: Costs are for 40-foot buses
60-foot buses typically cost 40% more

Bus Overhauls	
155 New Flyer 40-foot Diesel	Completed 2017
32 Neoplan DMAs	Completed 2018
155 New Flyer 40-foot Diesel	Ongoing (95 delivered)
25 New Flyer 60-foot Hybrid	Pending Award
60 New Flyer 40-foot Hybrid	Program Development



Bus Industry Overview

Trending towards advanced extended range hybrid and battery electric buses to reduce environment impacts and improve customer experience.

- Multiple bus manufactures capable of producing various propulsion types
- Reduced maintenance and operating costs
- Improved reliability and passenger amenities
- Electric bus infrastructure upgrades required





Path to a Zero Emissions Fleet

2000: Compressed Natural Gas (CNG) Buses

2004: Electric Trolley Bus (ETB) Fleet

2004: Dual Mode Articulated (DMA) - Silver Line Fleet

2010: 60' Diesel Hybrid Fleet

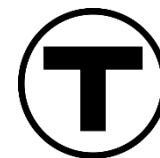
2015: 40' Diesel Hybrid Fleet

2015: 40' Hydrogen Fuel Cell Bus

2017-18: 40' Battery Electric Bus (BEB) Feasibility Study

2019: 60' New Flyer XDE60 – Extended Range Hybrid Bus

2019: 60' New Flyer XE60 – Prototype Battery Electric Buses



Future of MBTA Bus

In accordance with:

- Fleet and Facilities Plans
- Focus 40
- Better Bus Program



Key Objectives:

- Improve performance of advanced hybrid buses with extended engine-off operations (upwards of 30% fuel savings)
- Reduced GHG emissions
- Improved overall service, accessibility, and mobility
- Add passenger amenities and safety features

Upcoming plans include:

- 194 New Flyer hybrid buses – delivery commencing in August 2019 through 2020
- Continued evaluation of five New Flyer prototype battery electric buses
- Purchase of additional battery electric buses – RFI released to the industry
- Purchase of next fleet of advanced hybrid buses – RFI released to the industry



Thank You!