Massachusetts Bay Transportation Authority

Fairmount Line Zero Emissions Project

Michael Muller, Executive Director of Commuter Rail
Alistair Sawers, Senior Director of Rail Modernization
May 28, 2026

Summary and Purpose

Provide an update on the Fairmount BEMU Project, including:

- Benefits of BEMU train sets
- BEMU Manufacturer and Financier Selection
- Discussion of contract framework
- Estimated project timeline
- Update on supporting project infrastructure and projected operations costs

Source: Stadler

Benefits of BEMU Train Sets

The proposed BEMU design delivers highly reliable, modern rolling stock

Source: Stadler

- Four-car bi-level trainsets
- Operate at up to 79 mph using the on-board traction battery or under catenary
- Significantly reduce noise and vibration for passengers and residents adjacent to the route, yards and maintenance facility
- Fully compliant with all modern safety and crash worthiness regulations

Benefits of BEMU Train Sets

The proposed BEMU design delivers highly reliable, modern rolling stock

- Enables 20-minute headways on the Fairmount Line, with the future possibility of 15-minute service
- Operate in formations of up to 8-cars as two coupled BEMU trainsets
- Interface and serve both high-level and low-level platforms, and potential future expansion to other lines

Source: Stadler

Benefits of BEMU Train Sets

The proposed BEMU design delivers highly reliable, modern rolling stock

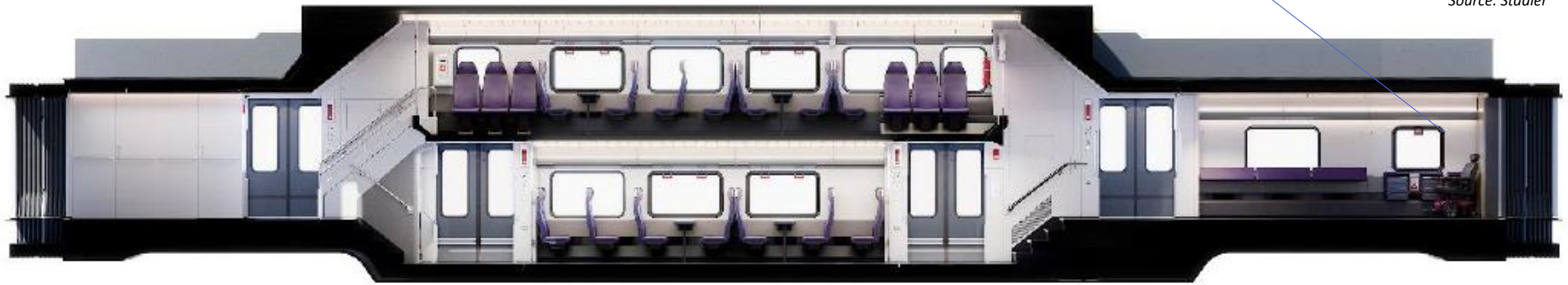
Source: Stadler

- Modern interior with spacious seating layout
- Modern passenger information displays, CCTV and passenger counting system

Benefits of BEMU Train Sets

- As per MBTA accessibility requirement, ADA - accessible areas will be provided in each passenger car,
- A fully accessible restroom will be provided on one mid-level of each train set.

Source: Stadler



Source: Stadler

Benefits of BEMU Train Sets

- Infrastructure cost savings due to discontinuous electrification with no additional OCS of the Fairmount Line
- Battery-Electric service reduces 1.6 million gallons of fuel and 17,700 tons of CO_2 per year compared to diesel
- Buy America compliant and manufactured in USA

Source: Stadler

BEMU Procurement Process

- A Request for Information was issued in August 2024 for the manufacture of battery-operated rolling stock
- A Request for Proposals was issued for the manufacture of the BEMUs in Jan 2025
- A Request for Proposals for the financing of the BEMUs was issued in June 2025
- The procurement followed the FTA's best practices to select winning proposals based on best value to the MBTA

Source: Stadler

BEMU Manufacturer and Financier Selection

BEMU Manufacturer

Stadler US Inc has been recommended as the Proposed Manufacturer, to

- manufacture 7 four-car BEMUs, with options to purchase up to additional 96 cars
- provide technical support and spare supply services for a minimum of 5 years and maximum of 15 years

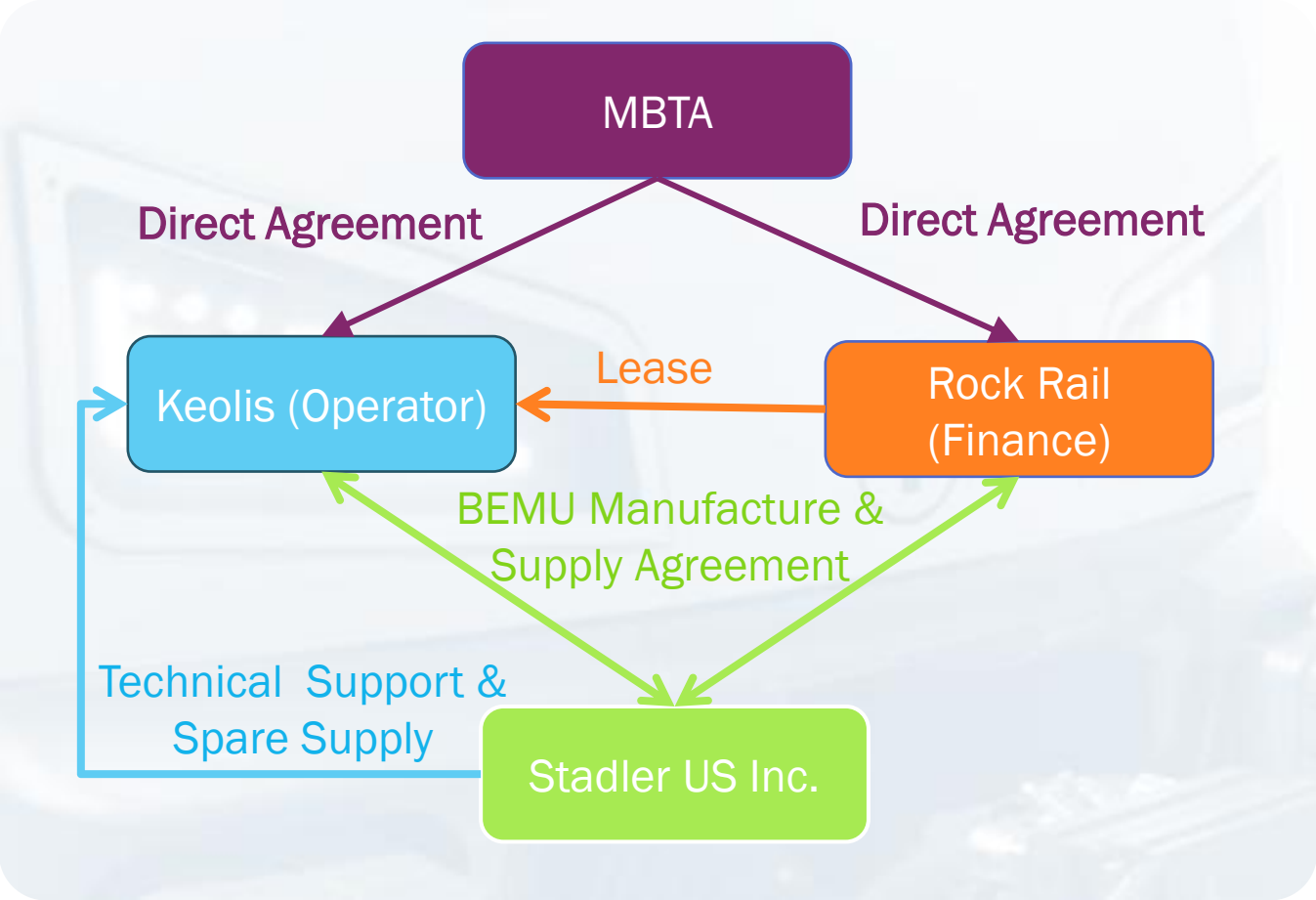
Financier

Rock Rail Holdings Limited has been recommended as the Proposed Financier , to

- finance the BEMUs over 15 years

Source: Stadler

Agreement Structure



- Rock Rail and Keolis purchase the BEMUs from Stadler through a Manufacture and Supply Agreement (MSA)
- Keolis and Rock Rail will enter into a 15-year lease to finance the manufacture of the BEMUs
- The direct agreement between MBTA and Rock Rail will require MBTA to ensure that the Operator transfers the lease to each successor operator for the full 15 years of its term
- Keolis and Stadler will enter into a Technical Support and Spare Supply Agreement (TSSSA)
- The current Commuter Rail Operating Agreement expires in June 2027
- MBTA and Keolis will enter into a direct agreement to ensure the transfer of these agreements to the successor operator

Key Drivers of Cost Increases

Price Increases

- General Inflation
  - previous estimates were in 2023 prices
- Tariffs
  - Equipment is Buy America compliant
  - However, tariffs contributed to cost increase for specialized components not available from domestic sources

Scope changes

- Design changes
  - Cost of modifications required for accessible areas at every door
  - Longer schedule increased manufacturing and cost of performance bonds
- Capital maintenance
  - previous estimates did not include provision for refurbishment
  - Outside the current CIP, but a contractual commitment in future years

Forecast Timeline

- Award of Fairmount Line BEMU Rolling Stock Contract

Q1 Q2 Q3 Q4

2026

Q1 Q2 Q3 Q4

2027

- BEMU Mockup delivery for demonstration

Q1 Q2 Q3 Q4

2028

- First BEMU delivered for testing

Q1 Q2 Q3 Q4

2029

- Light maintenance facility delivered

Source: Stadler

Infrastructure Update

Supporting facility and infrastructure work are funded through previous CIP.

BEMU Maintenance Facility and Charging Infrastructure at Readville Yard

- Design, permitting and final site investigation is underway
- Two track building is designed to be expandable
- Project includes storage, a substation and charging points for 7 BEMUs (layover tracks at Widett Circle available after phase 1 of that project)
- Maintenance Facility construction RFP is expected late 2026
- Construction bid will be brought to MBTA board for approval

Other supporting infrastructure

- Additional catenary is no longer required after power modeling with train manufacturer input
- No signal modifications are anticipated at this time subject to final train manufacturer review
- Clearance including platform edge repairs and wire clearance height changes are required at South Station

	Estimate (YoE$ millions)
Charging point & substation	10-14
BEMU Maintenance Facility	48-58
Track renewal (completed)	5
Clearance work at South Station	2-2.5
Signal modifications	None needed
MBTA project admin charge	3-4.5
Total	$68-84 million

Appendix

Scope of Technical Support Agreement (TSSSA)

TSSSA benefits include operator employing union workers to maintain the BEMU trains with Stadler providing maintenance technical support alongside BEMU materials and spare supply services

- Additional expertise initially to establish robust systems and train Operator staff, building in-house capability over time through providing in-house craft workers

Maintenance Training and Expert Advice	Dedicated 24/7 Stadler technical support staff on-site
	Training program development for Operator union workforce led maintenance
Materials	Supply required materials for scheduled and corrective maintenance
	Supply materials required for major component overhauls/replacement
	Management of BEMU spare parts and materials
Performance Regime	Included to align incentives for maintaining BEMU fleet reliability and availability