

Commuter Rail Technologies

As part of the regional FasTracks program, commuter rail is being considered for several corridors. The RTD FasTracks Team has been studying different commuter rail vehicle technologies to determine what works best for the overall FasTracks system as well as each potential commuter rail corridor. Four commuter rail vehicle technologies have been studied including:



- **Diesel Locomotive Hauled Coach (LHC)** – coach cars pushed or pulled by a locomotive that is powered by diesel fuel



- **Dual Mode Locomotive Hauled Coach (LHC)** – coach cars pushed or pulled by a locomotive that is powered by diesel fuel or electricity



- **Diesel Multiple Unit (DMU)** – single and double level cars that are each powered by a diesel engine



- **Electric Multiple Unit (EMU)** – single level cars powered by AC electricity and double-level cars powered by DC electricity

As part of the technology evaluation, diesel and dual mode LHC and double level DMU and EMU are recommended for elimination from further consideration for FasTracks commuter rail corridors. Reasons include:

- **Diesel LHC** – projected ridership for the different corridors does not justify the high capital and fuel costs
- **Dual Mode LHC** – projected ridership for the different corridors does not justify the high capital and fuel costs, safety concerns because it requires the use of third rail for electricity
- **Double Level DMU** – not a proven technology because it is not currently in revenue service
- **Double Level EMU** – additional cost to modify a DC electric power system to expand capacity or extend service

Single level DMU and EMU are the two technologies that are recommended for consideration for the East Corridor and the overall FasTracks system. Comparisons between DMU and EMU are provided on exhibits at the Transit Alternatives Station.