

Electrification Study Backgrounder



#6 Network Options

The electrification study is examining how GO rail services will be powered in the future – using electricity, enhanced diesel technology or other means. The study is using an expanded and enhanced GO rail network from the network of today as the basis of comparison. This “reference case” network presumes that additional tracks and some of GO’s proposed line extensions (including potential expansions to St. Catharines, Kitchener, Barrie Waterfront, Bloomington Road, and Bowmanville) will be constructed in the coming years, resulting in increased train volumes. The study also includes the future Air Rail Link between Union Station and Lester B. Pearson International Airport.

ELECTRIFICATION STUDY – WHAT HAS BEEN DONE?

The electrification study team has looked at GO’s existing seven rail corridors, the proposed extensions, and the Airport Rail Link to consider what rolling stock technologies might work well to power future rail services.

In particular, the study team looked at where on the rail network four rolling stock technologies – diesel locomotives, electric locomotives, dual-mode locomotives and electric multiple units (EMUs) – could be used in the future.

As a first step in identifying network options, the study team determined that:

- Investment in electrification should be focused on the corridors – Georgetown, Lakeshore East and Lakeshore West – that have the highest demand and service, and are likely to deliver the most benefits.
- The Lakeshore East and Lakeshore West corridors should operate the same type of rolling stock technology.
- The three technologies that require electrification (electric locomotives, dual-mode locomotives and EMUs) should be considered as a single “family” of technologies.

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FINDINGS TO DATE

From over 16,000 possible network options, the study team has concluded that 18 network options merit further study. These options range from electrifying one line (Georgetown or Lakeshore) to electrifying all corridors to some extent, using either electric locomotives or electric multiple units, possibly supplemented with dual-mode locomotives.

These 18 network options will be evaluated at a high level to see how they compare in terms of transportation efficiency, environmental and cost considerations. Up to six of the highest rated options will be carried forward for more detailed assessment in the final phase of the study.

FOR MORE INFORMATION

Background report: [Network Option Evaluation Report](#)

Available for download at: www.gotransit.com/estudy