

Electrification Study Backgrounder



#3 The GO Rail Network

GO Transit is the Greater Toronto and Hamilton Area's interregional public transportation service. Each weekday, GO Transit carries over 200,000 passengers on 180 train trips and about 2,000 bus trips. GO trains operate on seven rail lines and service 59 stations, connecting Hamilton in the west to Oshawa in the east and spanning as far north as Barrie.

The electrification study is examining how GO rail services on all seven lines will be powered in the future – using electricity, future 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 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 (ARL) between Union Station and Lester B. Pearson International Airport.

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GO RAIL NETWORK – KEY FACTS AND FIGURES

Train Technology: The “rolling stock” technology used to power GO trains today is diesel-electric. Each train is made up of a diesel locomotive at one end, a cab car at the other end, a wheelchair accessible coach, along with a set of up to 12 bi-level passenger coaches. The fleet of diesel-electric locomotives is made up of 29 F59 locomotives and 27 of the more modern and more powerful MP40 locomotives. The electrification study is examining which rolling stock technology – electricity, future diesel or other – should be used to power GO trains in the future.

Ridership: GO trains carry over 47 million passengers each year. This will increase substantially as the planned network expansions are completed, and more frequent two-way and off-peak service is added across the rail network. The electrification study is considering which rolling stock technology will provide the most benefits for GO train users and the broader public.

Rail Network Use and Ownership: Unlike other commuter railways around the world that operate on dedicated rail lines, GO trains run on a mixed-use network that also serves freight and transcontinental trains. In addition, different sections of GO’s rail network are owned by Canadian National Railway Company (CN) and Canadian Pacific Railway (CP). As such, the electrification study team has initiated discussions with CN, CP and other rail network users as part of the study process.

Rail Network Infrastructure: The GO rail network includes many types of infrastructure and components, including tracks, stations, platforms, parking lots, maintenance garages, signal systems, bridges, level crossings, road-rail and rail-rail grade separations, river crossings and culverts. The electrification study includes developing a detailed inventory of this rail infrastructure for the purposes of determining what new or different infrastructure would be needed to electrify part, or all, of the rail network in the future.

FOR MORE INFORMATION

Background report: [GO Electrification Study Baseline Report](#)

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