

# Electrification Study Backgrounder



## #2 Study Process and Key Decision Making Factors

The overriding purpose of the electrification study is to provide Metrolinx's Board of Directors with the information needed to decide how GO and ARL trains will be powered in the future – using electricity, enhanced diesel technology or other means. The main questions to be answered by the study are:

- Is there a **case for the electrification** of part, or all, of the rail network?
- If so, **how** can this be done?
- **Where** and **when** should it be done?

The study is following a five-phase process to answer these questions:

1. **Initiation** (January 2010) – Development of study approach, stakeholder engagement plan, and decision making framework. Report: High Level Decision Making Framework
2. **Baselining** (January-March) – Setting of study objectives and review of current conditions across the GO rail network. Report: GO Electrification Study Baseline Report
3. **Options Development** (March-June) – Assessment of technology, power supply and network options. Reports: Rolling Stock Technology Assessment; Power Supply and Distribution Systems Technology Assessment
4. **Short listing of Options** (June-September) – Short listing of up to six network options, identifying where on the rail network various technologies could be used. Report: Network Option Evaluation Report
5. **Detailed Assessment and Conclusions** (September-December) – Detailed assessment findings and conclusions.

The study includes a comprehensive stakeholder engagement and communications program to reach out to and consult with stakeholders throughout the study process.

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## KEY DECISION MAKING FACTORS

Deciding how GO and ARL trains will be powered in the future will require trade-offs – as different technologies, including electric and diesel trains, offer different benefits and costs. As a basis for developing and short listing options and reaching conclusions for consideration by the Metrolinx Board, the electrification study team was guided by the Electrification Study Terms of Reference, which were developed by the Community Advisory Committee.

The study team has identified five key “evaluation categories” to help compare and contrast the various options. These decision making factors and related considerations include:

- **Environmental and Health:** Considerations – emissions, noise and vibrations, health, biodiversity, water, and effect on parks and open spaces.
- **User Benefits/Quality of Life:** Considerations – efficiency, travel time, quality and reliability of service, access for users.
- **Social Community:** Considerations – safety, land use, community impacts, heritage and archaeology, visual impacts.
- **Economic/Financial:** Considerations – capital cost, operating cost, revenues, cost-effectiveness, land use and property value, property effects, employment effects.
- **Implementation:** Considerations – constructability, stakeholder acceptability, funding, risks.

## FOR MORE INFORMATION

Background report: [High Level Decision Making Framework](#)

Available for download at: [www.gotransit.com/estudy](http://www.gotransit.com/estudy)