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NATURAL GAS IN TRANSPORTATION

a clean and affordable transportation fuel

Using Renewable Natural Gas on the Road to Net-Zero Emissions

Municipalities that use natural gas vehicles have a readily-accessible pathway to reach their net-zero objectives through the use of renewable natural gas (RNG).

RNG is 100% renewable as it is derived from local organic waste sources including wastewater plants, landfills and agriculture. It is an attractive option for municipalities, as it builds on the already low operating costs of natural gas vehicles, while providing the lowest-cost pathway to net-zero emissions.

The average cost of RNG is currently comparable to diesel but as diesel prices rise with inflation and the addition of carbon taxes, the cost advantages of RNG will grow.

The RNG required to meet existing fleet demands is 1 Petajoule (PJ) per year. A recent study sponsored by Natural Resources Canada identified that by 2030, the RNG potential will be 100 times that amount — taking into account existing projects and known commitments.

By using municipal waste to source RNG, the benefits to communities are three-fold:

1. Significant emissions reductions and participation in the circular economy;
2. Profit development opportunities for municipalities that produce their own RNG; and
3. Cost savings through the consumption of this municipally-produced energy.

Consider this opportunity: 100 petajoules of RNG (produced by municipalities) = 2.5 billion litres of diesel (at a projected price of $4.6 billion in 2030).

Congratulations to Hamilton Street Railway for launching Ontario's first carbon-negative bus! This bus, fuelled 100% by RNG, was launched in March 2021 in partnership with Enbridge Gas.

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Natural gas is a market-ready option for municipalities looking for a clean and affordable transportation fuel for their buses, refuse collection vehicles and other fleets.

Take a look below at the many municipalities across Canada that are already taking advantage of natural gas for their local transportation needs.

Public Transit Agencies in Canada Using Natural Gas Buses

1,000 buses across Canada: from Grande West Vicinity, Nova Bus, and New Flyer

- BC Transit (Victoria, Nanaimo, Kamloops, Whistler)
- Translink (Vancouver)
- Calgary Transit
- Medicine Hat
- Red Deer
- Hamilton Street Railway

Use of Natural Gas in Collection Vehicles in Canada

1,000 collection vehicles across Canada: used for curbside, institutional and container collection services

- City of Vancouver
- City of Toronto
- City of London
- Bluewater Waste Association (ON)
- WM (BC, AB, ON, QC)
- GFL (BC, AB, ON, QC, NS)
- Waste Connections (BC, ON)
- Emterra (BC, MB, ON)
- Tomlinson (ON)

Benefits of Converting to Natural Gas Buses

An average bus fuelled by diesel uses **$39,000*** of fuel, emitting **99 tonnes of CO_2e** (greenhouse gases) per year.

By 2030, if your municipality uses RNG buses, there would be a cost savings of $10,000 per year per bus due to the rising cost of diesel and avoiding carbon taxes.

In 2030, we expect transit buses will save $26,000 per year per bus by using CNG.

These municipalities (listed above) using natural gas buses collectively see **emissions savings of 16,800 tonnes CO_2e per year.**

Benefits of Converting to Natural Gas Refuse Vehicles

An average refuse vehicle fuelled by diesel uses **$37,000*** of fuel, emitting **93 tonnes of CO_2e** (greenhouse gases) per year.

If you use RNG refuse vehicles, your carbon footprint will be zero.

In 2030, we expect refuse vehicles using CNG to save $10,000 per year per refuse truck.

These municipalities (listed above) using natural gas vehicles collectively see cost savings totalling **$20 million** per year.

*Note: Calculation is based on historical price of $1/litre of diesel

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