PEMBINA Institute

Where Does Your Money Go When You Fuel Your Vehicle?

How charging an EV keeps more energy spending in Ontario

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Key takeaways

- **EVs cost much less to fuel than gas vehicles.** Fuelling an EV costs about 3.5 cents per kilometre before taxes, compared with 11 to 16 cents for a gasoline vehicle. This represents a saving of 7.5 to 12.5 cents per kilometre.
- **Electric vehicle (EV) charging keeps a larger percentage of energy spending in Ontario.** More than 50% of gasoline spending leaves Ontario, compared with less than 10% of EV charging spending. Gasoline spending largely flows out of the province through crude oil and fuel supply chains, while most electricity spending supports Ontario's electricity system and economy.
- **Electricity prices are more stable than gasoline prices.** Gasoline prices are shaped by volatile oil markets, supply disruptions and geopolitical events. Ontario gasoline prices rose 33% between January and July 2026. Ontario electricity prices for households and small businesses are set by provincial agencies through an annual review process, providing greater price stability and predictability.
- **Electrifying transportation strengthens energy security.** Gasoline depends on crude oil from outside Ontario that enters the province through U.S. pipelines and is priced in global markets. EVs rely on the electricity system that Ontario has built and continues to expand.
- **Electrifying transportation reduces a major source of greenhouse gas pollution**. Transportation accounted for 31.6% of Ontario's emissions in 2023, making it the province's largest emitting sector.

Introduction

Transportation is one of the biggest energy expenses for households and businesses, and rising gasoline and diesel prices increase costs beyond the fuel pump. When fuel gets more expensive, so does delivering goods and services, and those costs show up in the price of everything from groceries and takeout to business equipment and hospital supplies.

Not all transportation energy spending has the same impact. Depending on whether a vehicle runs on gasoline or electricity, different amounts of that spending stay in Ontario to support households, businesses, and communities across the province.

Every time an Ontarian fuels a vehicle, they are making an energy purchase. Their choice affects where that money flows, which industries benefit, and how much of that spending stays in the province's economy.

This report compares where transportation energy dollars go when a driver fuels a gasoline-powered vehicle versus charges an electric vehicle (EV). It answers the following questions:

- Which vehicle type is cheaper to fuel?
- Which vehicle type keeps the most money in Ontario?
- Where does your money go when you buy gasoline?
- What changes when those dollars power an EV?
- What does this mean for Ontario?

We tracked spending from the original energy source through to the final energy purchase. For gasoline, this includes crude oil production, refining and fuel distribution. For electricity, it includes generation, transmission, and distribution. (See the appendix for greater detail on our methodology.)

Which vehicle type is cheaper to fuel?

EVs cost significantly less to drive because they use less energy per kilometre and electricity is less expensive than gasoline. Based on January to June 2026 fuel prices, driving a gasoline vehicle costs an estimated 11 to 16 cents per kilometre before taxes, depending on global crude oil prices and refining costs. Driving an EV costs about 3.5 cents per kilometre before taxes.[1] As a result, **Ontarians save 7.5 to 12.5 cents for every kilometre driven in an EV**, leaving more money available to spend or invest elsewhere in the Ontario economy.

[1] Based on the assumption of a 90/10 split between home and fast charging.

Which vehicle type keeps the most money in Ontario?

More than half of every dollar Ontarians spend on gasoline leaves the province, compared with less than 10% of every dollar spent on charging a light-duty EV, according to our analysis.[2] See Figure 1.

The difference reflects how each energy system is structured. Much of the money spent on gasoline, as well as diesel, goes towards imported crude oil and other parts of the fuel supply chain outside of Ontario.[3] Charging an EV follows a different path. Most spending supports Ontario's electricity system, which is largely powered, maintained and operated within the province.

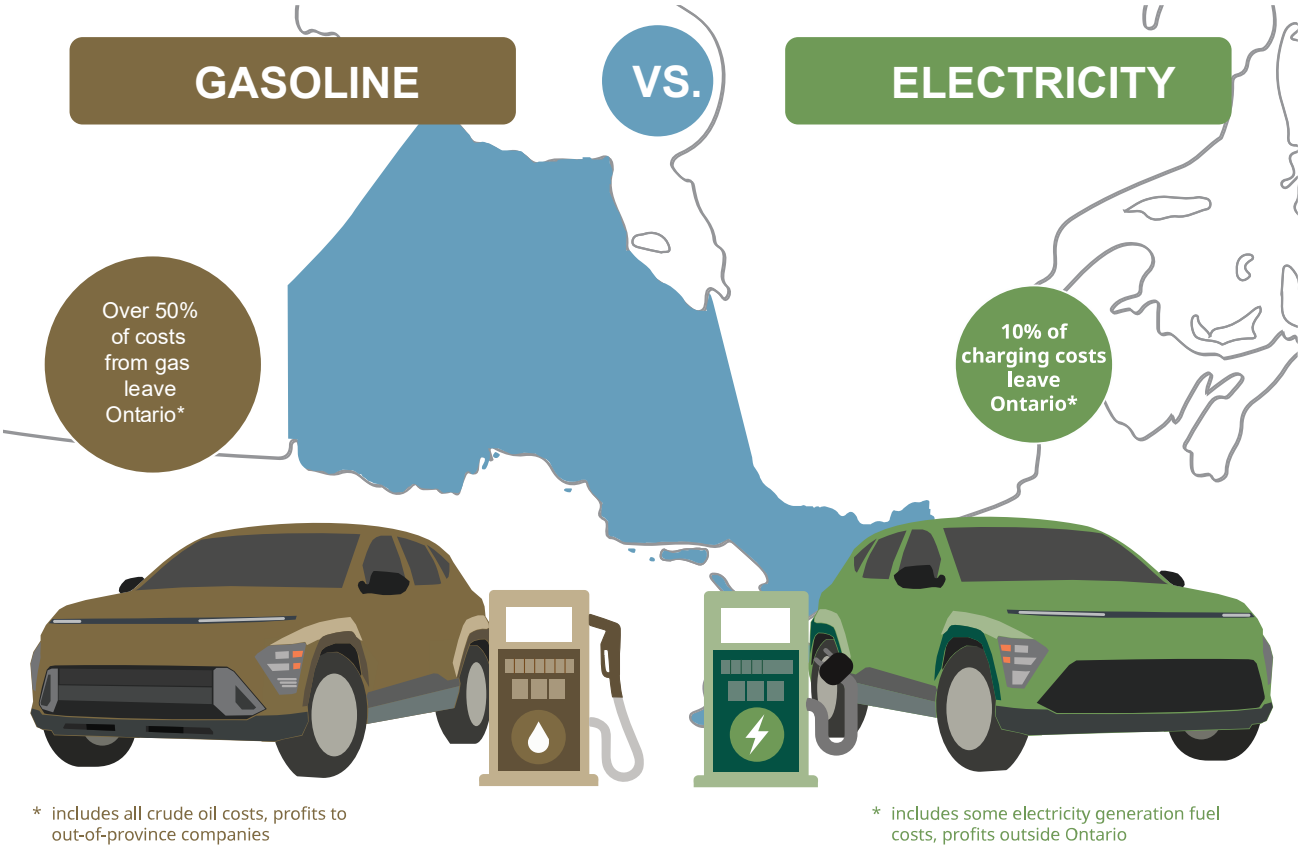

Figure 1. A larger share of transportation energy spending leaves Ontario when drivers use gasoline rather than electricity.

[2] This finding holds for both before-tax and after-tax spending.

[3] Gasoline and diesel are both refined from crude oil and share many parts of the same refining and distribution supply chain. Although our work focused mostly on passenger vehicles, the main takeaways in this report on gasoline also apply to diesel.

Where transportation energy spending ends up is only one aspect of the comparison between gasoline and electricity. The choice of energy source also affects how much drivers pay to fuel their vehicles.

Where does your money go when you buy gasoline?

Most of Ontario's vehicles still run on gasoline and diesel. Figure 2 shows how the money paid at the pump is distributed across the fuel supply chain using the fuel price from January 2026.

Crude oil is the largest component of gasoline prices. Most of the crude oil used in Ontario comes from Western Canada, primarily Alberta, with a small share directly imported from the United States. However, most western Canadian crude oil reaches Ontario through pipelines that cross the U.S. before re-entering Canada, leaving the province dependent on cross-border transportation routes. This dependence has prompted discussion of building a direct pipeline from Alberta to Ontario. While such a pipeline could reduce reliance on U.S. transportation routes, it would not protect Ontarians from fluctuations in global oil prices.

Refining, which includes labour, infrastructure and profits, is another significant share of the price drivers pay.

Distribution and retail plus taxes make up the remaining share.

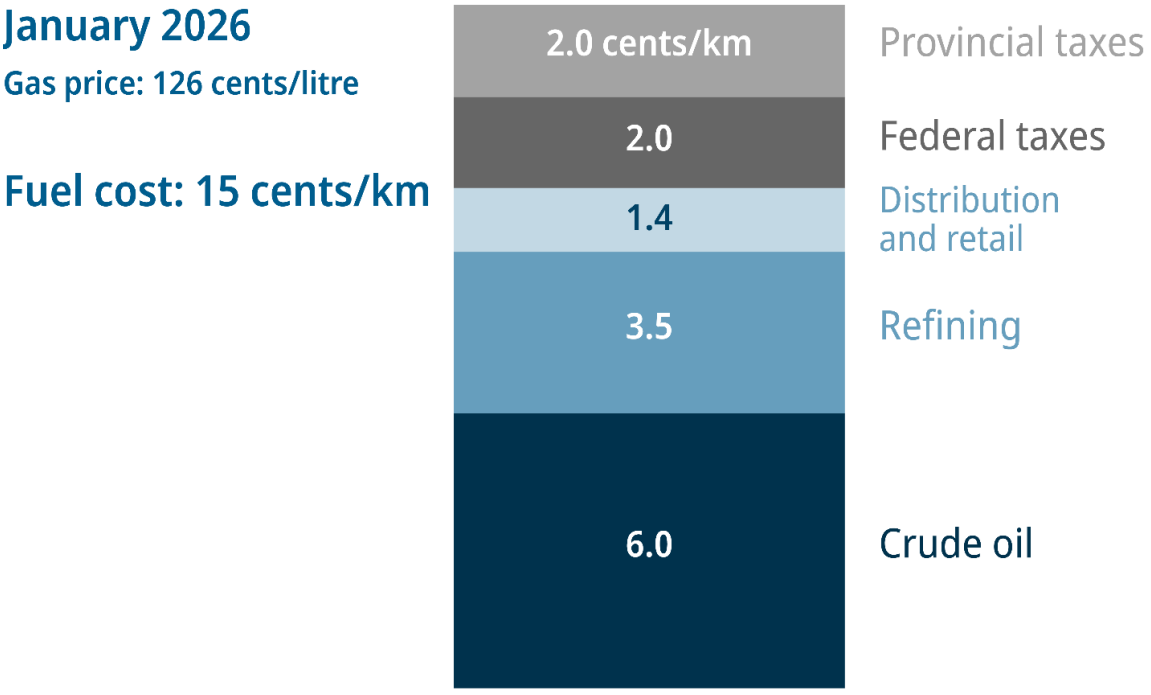

Figure 2. Crude oil and refining costs make up the bulk of the cost of fuel in Ontario.

Note: The fuel cost of 15 cents/km is the rounded, after-tax amount from January 2026, or 11 cents/km before taxes.

As noted earlier, **more than half of every dollar spent on gasoline leaves Ontario. This amounts to 5.5 to 8 cents per kilometre driven based on before-tax fuel prices between January and June 2026.** The primary reason is that imported crude oil accounts for a significant share of fueling costs. Portions of the refining costs and the distribution and retail costs also leave Ontario as profits and dividends, with foreign companies owning three of Ontario's four refineries and about 20% of Ontario's fuel retail network. As a result, the price Ontario households and businesses pay for gas-powered transportation is set largely by forces outside the province.

Gasoline prices respond to shifts in global oil markets, supply disruptions, and overseas geopolitical events. Between January and July 2026, gasoline prices in Ontario increased by 33%, while refining margins (the gap between crude oil costs and the wholesale price of refined fuels) more than doubled over the same period (Figure 3). These price swings illustrate how quickly transportation costs can rise even when driving habits and provincial policy remain unchanged. The consequences of higher and more volatile fuel prices extend beyond drivers, raising the cost of transporting goods, which is passed on to consumers.

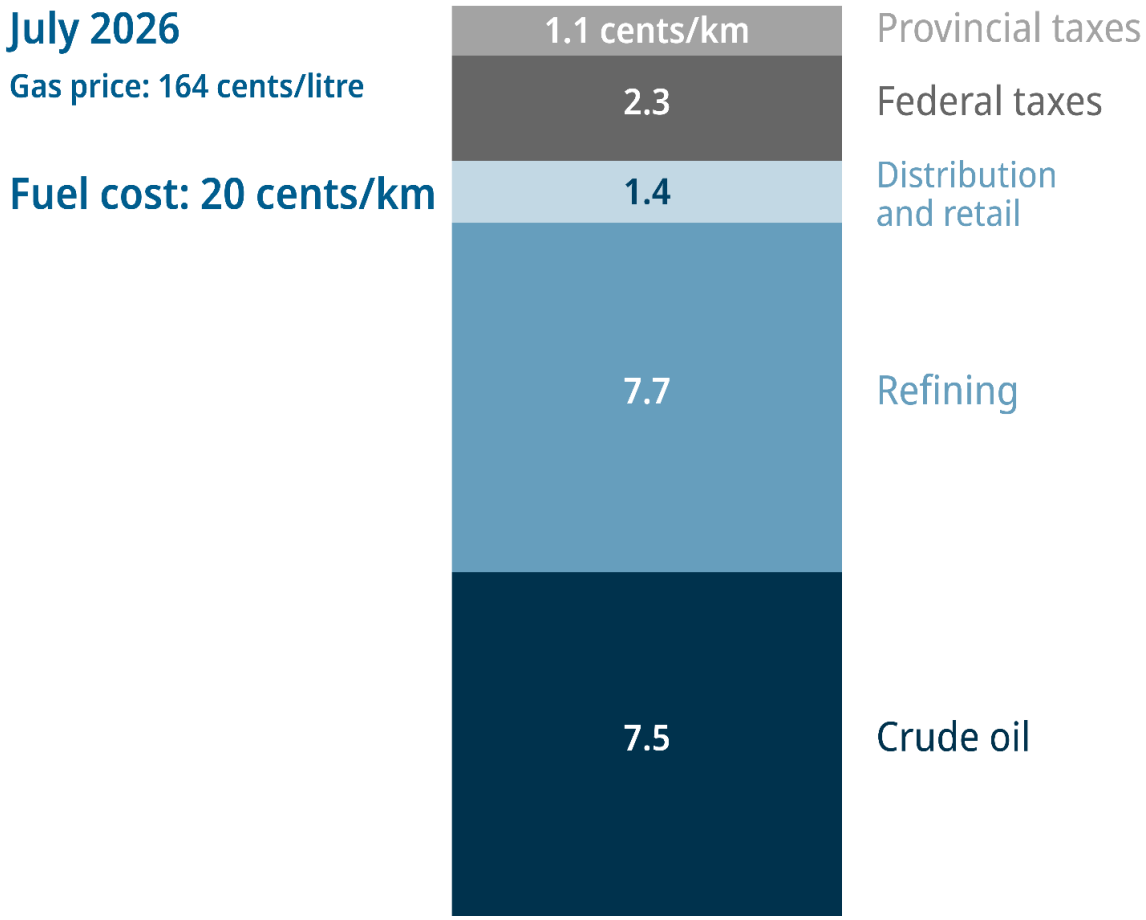

Figure 3. Conflict in the Middle East primarily contributed to the fuel cost in Ontario increasing from 15 cents per kilometre after taxes in January 2026 to 20 cents per kilometre in July 2026.

What changes when those dollars power an EV?

Where the money ends up when you charge an electric vehicle is very different from a gas purchase. Instead of paying for a globally traded commodity, drivers are buying electricity from Ontario's local market. This means that a large share of the energy spending supports local electricity generation, transmission and distribution.

Price stability also varies substantially between gas and electricity. Gasoline prices can change multiple times a day based on global markets, while Ontario electricity prices for households and small businesses are set by provincial agencies (e.g., Ontario Energy Board) through an annual review process and are far more stable and predictable.

Figure 4 shows how charging costs are distributed across the electricity system.

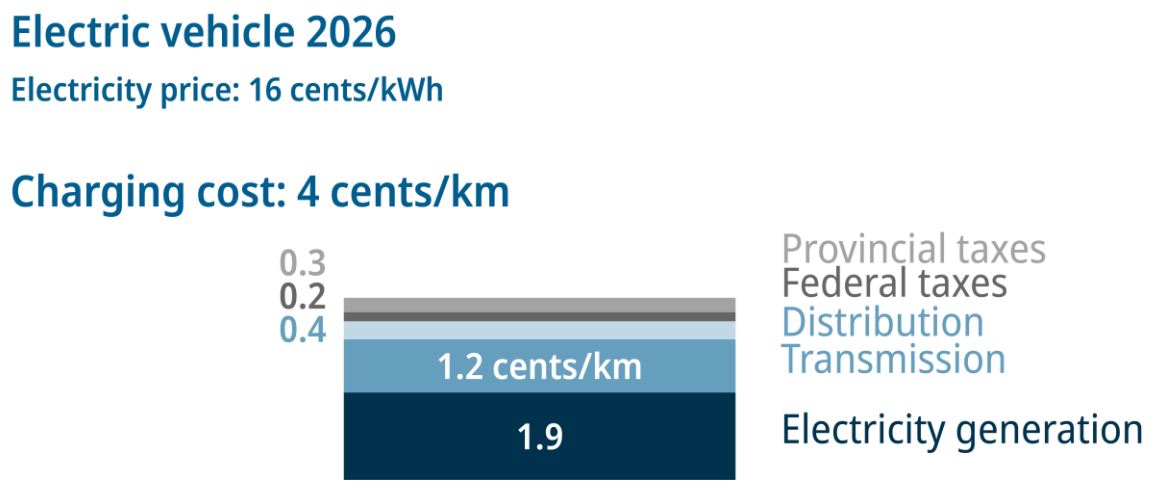

Figure 4. Electricity generation, followed by transmission, makes up the bulk of the cost of charging an electric vehicle in Ontario.

Note: The charging cost of 4 cents/km is after taxes (3.5 cents before taxes).

For EV drivers, the difference is that most of the cost is associated with electricity generated and distributed within Ontario. Unlike gasoline, where much of the cost is linked to imported crude oil, most electricity used to charge EVs comes from generators in Ontario.[4] Other parts of the electricity supply chain, including transmission and local distribution of electricity, are also entirely owned and operated by Ontario-based companies. Consequently, **only about 0.4 cents of the 3.5 cents per kilometre spent to charge an EV, before taxes, leaves Ontario, meaning that on average around 90% of charging costs stay in Ontario.**

[4] Provincially owned Ontario Power Generation supplies about half of the province's electricity, while Bruce Power, a privately owned Canadian business, supplies roughly another 30% of Ontario's electricity demand. Much of the province's other generation is also owned by Canadian companies, helping keep more value in Ontario.

Some electricity spending does leave the province through profits and dividends paid to companies based elsewhere in Canada[5] and through purchases of fuel for power plants, such as uranium from Saskatchewan or natural gas from western Canada. These expenditures, however, account for only a small share of the total cost to charge an EV.

Note that the findings above relate only to the cost of charging an EV and do not include the upfront purchase price of an EV. Vehicles, batteries and electricity infrastructure are sourced from around the world. However, compared with gasoline, a much larger share of transportation energy spending supports local businesses and infrastructure.

What does this mean for Ontario?

Transportation is an essential part of daily life, but not all transportation energy spending has the same impact on household budgets or the provincial economy.

Our analysis shows that **EVs are significantly cheaper to fuel than gasoline vehicles and keep a much larger share of transportation energy spending within Ontario.**

This disparity reflects the structure of the two energy systems.

Gasoline depends on crude oil produced outside Ontario, transportation routes that pass through the United States, and prices set in global oil markets.

Electricity is almost the opposite. Most of Ontario's electricity is generated, transmitted and distributed within the province, keeping benefits locally.

For drivers, this means lower fuel costs and less exposure to fluctuations in global oil prices. For Ontario, it means more transportation energy spending remains in the provincial economy, supporting the electricity system and the businesses that build, operate and maintain it. Electrifying transportation also strengthens Ontario's energy security by reducing reliance on crude oil transported through U.S. supply routes and making greater use of the electricity system the province has spent decades building and continues to expand.

Beyond the economics, electrifying transportation also reduces one of Ontario's largest sources of greenhouse gas pollution. Transportation accounted for 31.6% of Ontario's emissions in 2023, making it the province's largest emitting sector. Driving a typical gasoline vehicle in Ontario generates about 3–5 tonnes of CO_2e emissions annually, which translates to 24–40 million tonnes of CO_2e emissions annually for the 8 million or so light-duty vehicles in Ontario. EVs, with zero tailpipe emissions, can avoid most of these emissions.

[5] Alberta-based Bruce Power and TransAlta together own about 35% of Ontario's electricity generation.

As more Ontarians and businesses consider their transportation options, the choice of how a vehicle is powered affects more than individual fuel costs. It also influences where transportation energy dollars go and how much of that spending stays in Ontario.

Appendix A

Methodology

Gasoline vehicles

The breakdown of fuel costs is based on the cost categories used by the U.S. Energy Information Administration (EIA),[6] with the monthly values taken from Natural Resources Canada (NRCan).[7]

Electric vehicles

The breakdown of the costs to charge an EV are based on the Ontario Energy Board's description of the electricity system.[8] The allocation of costs across those categories is based on our forthcoming analysis of EV charging economics, which uses an approach similar to a 2020 U.S. National Renewable Energy Laboratory (NREL) study.[9] The resulting cost shares are broadly consistent with the breakdown of costs on Ontario electricity bills[10] and with other published studies (e.g., Power Advisory[11]).

Both types of vehicles

For an estimate of the profit and dividends, and other input costs for refineries and electricity generation plants, we relied on publicly available data in company annual reports and websites.[12]

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[6] U.S. Energy Information Administration, "Gasoline explained: Factors affecting gasoline prices." https://www.eia.gov/energyexplained/gasoline/factors-affecting-gasoline-prices.php

U.S Energy Information Administration, "Gasoline explained: Where our gasoline comes from." https://www.eia.gov/energyexplained/gasoline/where-our-gasoline-comes-from.php

[7] Natural Resources Canada, "Monthly Average Retail Prices for Regular Gasoline in 2026." https://www2.nrcan.gc.ca/eneene/sources/pripri/prices_bycity_e.cfm?productID=1&locationID=18&locationID=17&locationID=2&locationID=15&frequency=M&priceYear=2026&Redisplay=

[8] Ontario Energy Board, "Overview of energy sector." https://www.oeb.ca/ontarios-energy-sector/overview-energy-sector

[9] B. Borlaug, S. Salisbury, M. Gerdes, and M. Muratori, (2020). "Levelized cost of charging electric vehicles in the United States," *Joule* 4, no. 7 (2020), 1470-1485. https://doi.org/10.1016/j.joule.2020.05.013

[10] Ontario Energy Board, "Electricity rates." https://www.oeb.ca/consumer-information-and-protection/electricity-rates

[11] Power Advisory, *Electric Delivery Rates for Electric Vehicle Charging*, prepared for the Ontario Energy Board (2023). https://engagewithus.oeb.ca/ev-integration/news_feed/delivery-costs-report

[12] A few representative references include:
Ontario Power Generation, "Our role in the electricity system." https://www.opg.com/power-generation/our-role/

Bruce Power, "About." https://www.brucepower.com/

Hydro One, "Corporate Information." https://www.hydroone.com/supportcentre_/Pages/FAQs/corporateinformationfaq.aspx

The per-kilometre cost estimates were based on NRCan's fuel consumption ratings.[13] Across all models available in Canada in 2026, NRCan data indicates that a battery electric vehicle is, on average, three to four times more efficient than a comparable internal combustion engine vehicle. For example, the Hyundai Kona gasoline model has a fuel consumption rating of 7.6 litres per 100 km, while the electric version has an energy consumption rating of 2.0 litres equivalent per 100 km.

Limitations

Simplicity

Our analysis was simple by design since it was intended to provide a high-level assessment of where transportation spending goes. A more comprehensive analysis of the gasoline and electricity supply chains is beyond the scope of this work.

Uncertainty

The company-level data needed to derive detailed breakdowns of input costs for refining and electricity generation is often confidential and difficult to access. Consequently, our results are subject to some uncertainty. Despite this limitation, we are confident that a greater share of gasoline spending leaves Ontario and that the difference between the shares of gasoline and electricity spending that leave Ontario is of the correct order of magnitude.

The Pembina Institute recognizes and affirms these ancestral territories of the Mississaugas of the Credit, the Anishinaabe, the Chippewa, the Haudenosaunee, and the Wendat Peoples and the presence of many Indigenous Peoples. These lands we are on are also now home to many diverse urban First Nations, Inuit, and Métis Peoples.

These acknowledgements are part of the start of a journey of several generations. We share them in the spirit of truth, justice and reconciliation, and to contribute to a more equitable and inclusive future for all.

[13] Government of Canada, "Fuel consumption ratings search tool." https://fcr-ccc.nrcan-rncan.gc.ca/en/Search