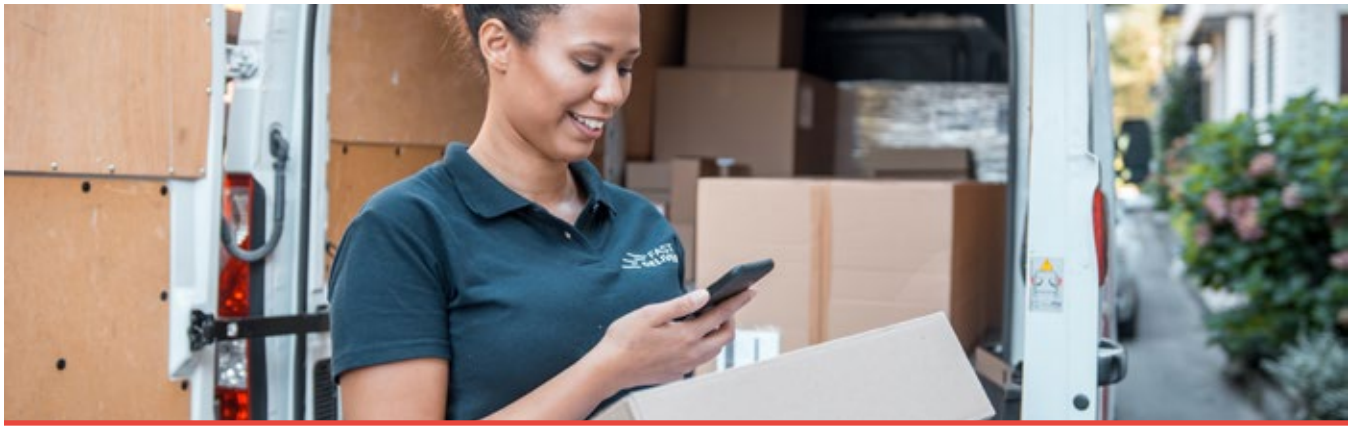
PEMBINA Institute

Businesses Driving Electric *fact sheet series*

How an electric vehicle can meet your business needs



If improving air quality and reducing emissions isn't enough to spark your interest in electric vehicles (EVs), consider the everyday benefits to your business, such as cost savings.

Have you ever wondered whether an EV could handle the day-to-day demands of your business or had questions about available models, their performance and ownership costs? We aim to help by providing information on how an EV can fit into your operations, with links to additional resources for further details.

Is the right EV model available to meet my business needs?

In Canada, you can choose from nearly 100 different EV models, including pickup trucks, SUVs, and sedans from 37 automakers such as Ford, Hyundai and Kia.

Explore the Government of Canada's list of models eligible for incentives.

For larger vehicles like cargo vans and box trucks, the selection is growing. Over 150 electric vans and trucks are now available from automakers like Ford, Mercedes-Benz and Freightliner. View Clean Energy Canada's ZE MHDV Availability Catalogue.

How far can EVs travel and how much can they carry?

The range of an EV varies by model, from 95 km to over 500 km. Here are some examples, with their range and carrying capacity:

Range: 350 to 520 km

Range: 380 to 560 km
Carrying capacity: ~750 to 1,000 kg
Towing capacity: ~4,500 to 6,350 kg

Range: 95 to 435 km
Carrying capacity: ~900 to ~30,000 kg

Can EVs stand up to cold climates?

Much like how driving habits and temperature affect fuel consumption in gas cars, temperature and driving behaviour influence an EV's range.

Geotab's analysis of millions of EV trips reveals that EVs perform optimally at around 21.5°C, even exceeding their rated range. But at -15°C, the range can decrease by as much as 54%. That means an EV with a 430 km range might only travel 232 km in such cold conditions.

A case study from Driving Force highlights the impact of even colder temperatures. In northern Alberta, where temperatures can drop to -40°C, Ford E-transit vans showed a reduced range of 60 to 80 km when fully loaded, compared to their rated range of 190 km.

It's worth noting that all vehicle types are affected by these conditions — gas vehicles experience a range drop of around 15 to 20% when temperatures fall from 25°C to -7°C.

How long will EV batteries last and is maintenance support available?

All EVs sold today include a battery warranty of at least 8 years or 160,000 km — although in many cases EVs maintain most of their original range even after travelling much farther.

Basic maintenance for EVs can be handled by most service shops, and some dedicated EV repair shops are already available. Service availability should also increase as technical institutes across the country introduce more EV technician training programs. Find the closest shop to you.

How much does it cost to own an EV?

The upfront cost of a new EV varies widely, ranging from $32,000 to over $160,000. For information on incentives that can help reduce these costs, check out our *How you can afford an electric vehicle for your business* factsheet from this series.

Owning an EV offers savings on both fuel and maintenance. Our *How to charge your business's electric vehicle* factsheet from this series provides details on charging costs.

Comparisons show that the cost of owning an EV for 10 years typically ranges from $60,126 to $77,721, while owning an equivalent gas car model can cost between $88,763 and $117,867. Online tools are available to help you understand these costs based on your driving habits.

Costs can differ between larger, heavier EVs and light-duty models. Tools are also available to compare the cost of owning an EV versus a gas or diesel truck.

Learn more about transitioning to a zero-emission vehicle

- How you can afford an electric vehicle for your business
- How to charge your business's electric vehicle
- Decarbonizing medium- and heavy-duty vehicles: Fact sheet series

October 2024
Sarah McBain

This work is supported by ALBERTA ecotrust