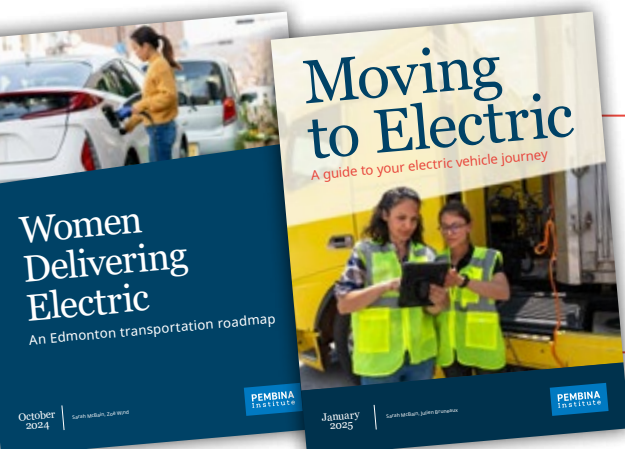


Charging an electric medium- or heavy-duty vehicle

Considerations for installing chargers



Electric vans, trucks and buses can save businesses up to 50% on fuel and maintenance. They replace the internal combustion engine with an electric motor and battery while maintaining a familiar driving experience. If you are considering switching to an electric vehicle, check out the [Moving to Electric](#) guide. And this factsheet will help you select the right charging solution for your operations.



The way goods and services are transported is quickly changing across the world. The [Moving to Electric](#) and [Women Delivering Electric](#) resources are designed to support small fleet owners in making the switch to electric vehicles.



Private vs. public charging stations

Private charging

Fleet operators can install low-power chargers at their home base, depot, or residence so they can charge overnight at low cost. Private charging typically costs around 15 to 20 cents per kWh.






This option is ideal for vehicles that return to base every day.

Public charging

Public charging stations serve long-haul trucks, fleets without a home depot, or those traveling beyond depot range. Networks like FLO or SWTCH operate high-power chargers for quick recharges.

Public charging is usually more expensive (30 to 50 cents per kWh) but can be faster and available throughout the day.

Time to charge (hours)

		Level 2 19.2 kW	Level 3 90 kW	Level 3+ 250 kW
	Cargo van	7.9	1.7	0.7
	Shuttle bus	11.6	2.5	1.0
	Medium-duty step van	8.2	1.7	0.7
	Medium-duty truck	10.7	2.3	1.0
	Heavy-duty truck	22.2	4.7	2.0

On average, small- and medium-sized businesses that electrified their vehicle fleet recouped their investment in about 21 months.

Setting up private chargers

Estimate your charging needs

The size and number of chargers you need depends on the number of vehicles, daily distance, duty cycle and idle time. For example, a school bus fleet with low daily milage and extended idle time needs less charging, while a long-haul truck fleet requires fast, high-power charging.

You can estimate your charging requirements using resources like [BC Hydro's fleet electrification guide](#).

Consult a qualified electrician and your local utility

A qualified electrician can assess whether your existing power supply is sufficient for your charging needs. They can also help you get the necessary permits and ensure compliance with safety standards.

If you have multiple vehicles or want to install fast chargers, you may need to upgrade your electrical service.

You'll also need to contact your local utility early to discuss rates, potential upgrades and optimal charging times.

Choose equipment to fit your needs

Carefully select charging equipment to meet your operational needs.

- **Low power chargers:** Ideal for vehicles parked overnight or for extended periods.
- **High power chargers:** Necessary for frequent, fast top-ups, though they come with higher costs.

IMPORTANT: Select equipment wisely. Chargers should be compatible with multiple vehicle models, brands and future upgrades as there are no uniform standards at this time.

Look at the installation costs

The cost of installing charging equipment can vary significantly — from a few hundred to several thousand dollars — based on the power levels of the chargers you choose to install, or if a service or electrical panel upgrade is needed.

INCENTIVE: Federal and some provincial subsidies cover up to 50% of charger costs. Learn about available incentives through the [Zero Emission Vehicle Infrastructure Program](#).

Look at electricity costs

Electricity rates are administered by local utilities. In some places, pricing varies by time of day:

- **Peak hours:** Higher rates (generally mornings and evenings)
- **Off-peak hours:** Lower rates (generally midnight to early morning)

Reach out to your utility to understand electricity delivery rates that apply to your location. Some utilities may offer tailored plans or discounts for commercial users.

TIP: You can reduce costs by identifying the best rates and scheduling charging for off-peak hours.

“Electricity is cheaper than diesel fuel. Charging overnight means you never have to stop at the diesel stations again.”

Sharae Moore – Owner-Operator, SHE Trucking
From Cal Fleet Advisor