

EVs are Driving the Clean Energy Transition

How Canadian businesses can benefit from EV adoption

Sales of electric vehicles (EVs) are accelerating at an unprecedented pace. Amid the race to net-zero and soaring fuel prices, the global EV transition is in full effect—and it is here to stay. The movement towards EVs and other low-emission vehicles is an opportunity for all businesses, bringing significant benefits and leadership potential.

With this transition comes many opportunities, and some challenges to overcome. The good news is that we can help you decide the best route for your business. **Let's find out how.**

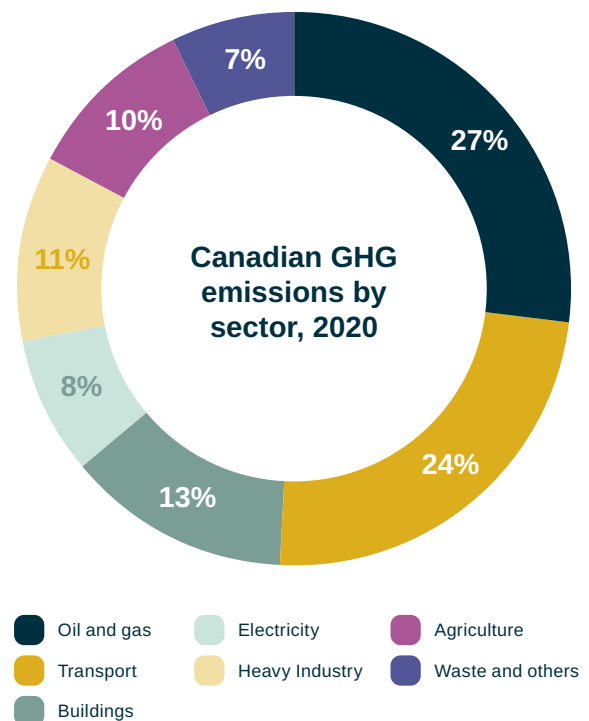
EVs are on the rise in Canada

With new EV fleet purchases **surging by 36%** in 2021, a growing trend is emerging among Canadian businesses. As the world pursues the transition to net-zero, businesses with passenger fleets should consider incorporating EVs into their planning and operations. There are opportunities to integrate light-duty EVs as the number of makes and models available continues to rise. Meanwhile, businesses with long-haul and heavy-duty fleets can begin to prepare for EV adoption, as automakers address challenges related to vehicle availability and associated range constraints.

The transportation sector is the second highest greenhouse gas (GHG) emitting sector in Canada and is critical for global and domestic supply chains. It accounts for roughly **24% of Canada's GHG emissions**, with fleet operations being a significant source of emissions for many businesses. **Over 170,000 Canadian businesses** trade goods with foreign markets, with most products requiring some degree of road transportation. Moreover, as the industry continues toward electrification, businesses must align to stay competitive and compliant with evolving regulations and standards.

It is no secret that businesses face mounting pressure to reduce GHG emissions, and the emissions-reduction potential, accessibility, and affordability of EVs makes them an appealing option. Let's explore why your business should consider adding EVs to your fleets and their role in your sustainability journey.

Oil, gas and transport make up more than 50% of Canada's GHG emissions



Adapted from: [Government of Canada](#)

The business case for EVs

With strategic electrification of passenger fleets, businesses can capitalize today on rapidly expanding availability of light-duty EVs. This also positions businesses to incorporate large, heavy-duty commercial vehicles into their operations as they become more readily available. Some key advantages include:



1. Emissions reduction

EVs represent a reliable solution for businesses looking to reduce their GHG emissions. EVs offer a direct and immediate way to improve environmental performance and address transportation emissions. In Canada, businesses can achieve up to a **90% reduction in vehicle emissions** by switching to EVs.



2. Lifetime cost savings

Although EVs currently have higher upfront costs than their conventional counterparts, lifetime costs are where they shine. Based on eight years of service, estimates show that total ownership costs are **approximately 25% lower** than that of conventional vehicles. These cost-savings are mainly a result of lower fuel and maintenance costs. Moreover, upfront costs of EVs are decreasing as technologies improve, new incentives and policies come into effect, and automaker original equipment manufacturers (OEMs) develop economies of scale.



3. Improved long-term energy security

Adopting EVs as part of your sustainability strategy prepares your business for a future powered by renewables. A renewable energy future is becoming necessary as fossil fuel prices rise and access to these resources becomes increasingly volatile. Additionally, automakers and policymakers are driving the EV transition, with governments worldwide announcing commercial EV incentives and **plans to ban conventional vehicles**. Businesses that fail to adapt now may face future energy security and regulatory-related challenges.



4. Industry leadership and excellence

Despite the relatively **low commercial adoption rate of EVs in Canada**, there are opportunities for businesses to lead the large-scale adoption of EVs. Corporate EV adoption can help drive progressive policy changes and new incentives to stimulate the broader EV market in Canada, while also demonstrating industry leadership to your stakeholders. Now that investors are using ESG criteria and climate change risk to screen businesses, the EV opportunity cannot be overlooked.



Case Study

Marine electrification (Leclanché)

Electrification of marine vessels and related infrastructure is an area that has received significant attention in recent years. Global energy storage solutions company **Leclanché** is making waves with its “ports and harbour” solution.

Leclanché's new fast-charging technology will be used to service two electric ferries on Lake Ontario. These stations will have the capacity to charge each ferry nearly 8,000 times per year, with a full charge taking only 10 minutes. This will allow the vessels to operate for as much as 21 hours every day, carrying a combined 123 cars and nearly 700 passengers per trip.

Although there are still challenges to overcome with the size of vessels and length of journey required for commercial shipping, this type of technology is just the beginning of what marine electrification can become. Regions such as Atlantic Canada and coastal British Columbia are prime markets for this technology given their popular existing ferry routes.

Continued investment in both land and marine infrastructure will be key to ensuring the successful adoption of EVs. The capacity to build the infrastructure exists—the challenge is how we can make sure we keep up.



The challenges of EV adoption

While the benefits of EVs are clear, we must recognize that there are also challenges to adoption. Many of these challenges arise from concerns over EV infrastructure accessibility and questions surrounding existing grid capacity.



1. Access to EV charging infrastructure

Access to commercial charging infrastructure is crucial for the uptake of EVs, especially for the adoption of long-haul transport. Significant improvements to national charging station networks have been made recently by companies like **Petro-Canada, Tesla, and Canadian Tire**. However, projected EV growth means that charging infrastructure will require ongoing investment moving forward.



2. Speed of grid modernization

Accelerating grid modernization and advancing related applications is crucial to the long-term viability of EVs. This is particularly important to enable widespread adoption of trucks and long-haul vehicles due to their drastically higher energy requirements compared to passenger vehicles. Initiatives such as **NRCan's Smart Grid Program** are vital to ensure that new EV infrastructure can seamlessly integrate into our electricity grids.



3. Limited medium and heavy-duty vehicle availability

Medium and heavy-duty vehicles face a different set of challenges than passenger EVs. Long journeys, heavy freight, and large cargo requirements of these types of vehicles make electrification more difficult. These vehicles are also responsible for a disproportionately large share of emissions compared to others, making it a critical challenge for businesses and automakers to overcome. To address these challenges, companies around the world are advancing medium and heavy-duty EV pilot projects in collaboration with OEMs. For example, GM is planning to launch **all electric trucks in 2035**.



4. Misconceptions around EVs

As with any new technology, businesses and their employees may be hesitant to adopt EVs without proper knowledge of their implementation and use. The transition requires social investment in addition to financial investment. Providing training programs on EV operation, maintenance, and best practices for charging can help promote corporate EV adoption.

How to drive the adoption of EVs in your business

Now that we've looked at the benefits of EVs and how to overcome their challenges, you may wonder how your business can transition toward EVs. A great place to start is by looking at your passenger fleets, including light-duty cars and vans. To mitigate higher upfront costs associated with EVs and effectively phase-out internal combustion engine vehicles, there are many things to consider.



1. Tap into federal and provincial incentives

In Canada, there are various provincial and federal incentives available to accelerate EV adoption. There are also **incentives** that offset the cost of charging stations and installations.

Federal

Incentives for Zero-Emission Vehicles Program (iZEV):

- Receive up to \$5,000 for new long-range and \$2,500 for short-range zero-emission vehicles (ZEVs), with a maximum of 10 per year.

Tax write-offs for businesses:

- Vehicles under \$55,000 are eligible for a 100% write-off, while vehicles over \$55,000 are limited to that amount plus federal and provincial sales tax.

Provincial

Electrify Nova Scotia Rebate Program:

- Receive up to \$3,000 for long-range and \$2,000 for short-range ZEVs purchased in Nova Scotia, with a maximum of 10 per year.

Clean Foundation and the Zero Emission Vehicle Infrastructure Program:

- Supports the installation of EV chargers throughout Nova Scotia, including on-street sites, workplaces, multi-unit residential buildings, and to support light-duty vehicle fleets.

PEI Universal EV Incentive:

- Receive up to \$5,000 for BEVs and \$2,500 for PHEVs purchased or leased for at least 12 months, with a maximum of 5 per year.

Contact us to learn about the incentives available in your region.



2. Charging infrastructure and equipment

Identify existing charging infrastructure and conduct a needs assessment for your fleet. Be sure to consider the location, nature, and extent of your operations when exploring different charging options. Depending on your fleet requirements, existing public charging infrastructure may be sufficient or you may need to consider installing on-site equipment to charge your vehicles during down-time.



3. Educate your workforce on EVs

When integrating EVs into your business, it is crucial to prepare your workforce. Investing in employee training programs on EV use, maintenance, safety, and best practices for charging will help ensure that your workforce is well-versed in EVs and related technology. This education will make for a smoother transition and effectively position your business to evolve as the EV market does the same.



4. Be an EV leader

Your business has an opportunity to promote EV adoption at all levels of your organization. Electrifying fleet vehicles is an obvious step when vehicles are crucial to your operations. However, offering things like on-site charging stations can demonstrate sustainability leadership and provide benefits such as enticing EV-driving employees and customers, improving reputation, and increasing asset value.



5. Future regulatory changes

Transitioning to EVs will help your business prepare for a renewable energy future and improve its energy security. Governments around the world continue to deploy policies and incentives that support EVs, and soaring fossil fuel prices show that renewables will power the economy of the future. You can significantly lower your business risk by switching to EVs now rather than later.



6. The stage is being set for long-haul and heavy-duty EVs

Electric makes and models of vehicles such as semis and box trucks are already in development; however, some challenges involving range and weight limitations remain. Despite this, promising progress has been made by companies like North American trucking leader, Freightliner, with their **eCascadia** model and Tesla with their **Semi** model.

To make EVs work best for your business, be sure to engage with stakeholders and identify how EVs align with your goals. Consider the costs and benefits of implementing a long-term EV strategy, including existing fleet requirements, workplace charging accessibility, and workforce education.



Case Study

Ingka Group (IKEA)

As part of their goal to be climate-positive by 2030, Ingka Group, owner of IKEA, is taking steps to eliminate emissions from operations and encourage EV adoption by the general public.

One of IKEA's core services is home delivery, with a stated goal of making all deliveries emissions-free by 2025 through the electrification of their delivery fleet. In Shanghai, IKEA has already achieved this by fulfilling over 900 deliveries daily using only electric vehicles. IKEA's commitment to incorporating EVs and electrification into their sustainability strategy exemplifies the environmental, financial, and social benefits of EV leadership.

IKEA is also looking beyond their operations to promote greater EV adoption by their customers. Over 93% of their stores now have EV charging stations, which helps improve the accessibility of EV infrastructure needed with more EVs on the road. Large companies such as IKEA, that engage with over 1 billion customers per year globally, can play a significant role in EV adoption by creating environments that encourage their use.

IKEA is just one example of a business that understands the importance of making EVs a core part of what they do and how they can extend their influence to support their customers' and employees' transition to EVs in the process.

Additional Resources



List of federal and provincial rebates for EVs:
[Electric Mobility Canada](#)



Clean Air Partnership Briefs and Reports
[Industry-leading research on EVs and charging infrastructure](#)



Tools and resources for businesses looking to green their fleets:
[National Resources Canada](#)



FLO's EV Charging Network
[Turnkey charging solutions for businesses](#)



Work with Upswing Solutions

Upswing Solutions is a Halifax-based consultancy delivering commercial strategies that build resilient, sustainable, and inclusive businesses. We can help you develop a robust electrification plan for your business, including environmental impact assessments, detailed cost-benefit analyses, alignment with your organizational goals, and training programs. When you choose to incorporate EVs into your operations, we can work alongside you to create a roadmap that supports your long-term sustainability strategy. Get in touch with us today to learn more.

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