FORESIGHT

BC NET ZERO
INNOVATION NETWORK

EV Alliance Business Plan

Cleantech Adoption Business Case

Feb 2026

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Acknowledgments

The BC Electric Vehicle Charging Alliance project was made possible through the financial support of BC Hydro, Simon Fraser University (SFU), the City of Vancouver, the University of British Columbia (UBC), and the BC Net Zero Innovation Network (BCNZIN).

Foresight Canada gratefully acknowledges that the BCNZIN Project was funded by Pacific Economic Development Canada's (PacifiCan) Regional Innovation Ecosystem program and the Province of British Columbia through the (former) Ministry of Energy, Mines and Low Carbon Innovation's Innovative Clean Energy (ICE) Fund.

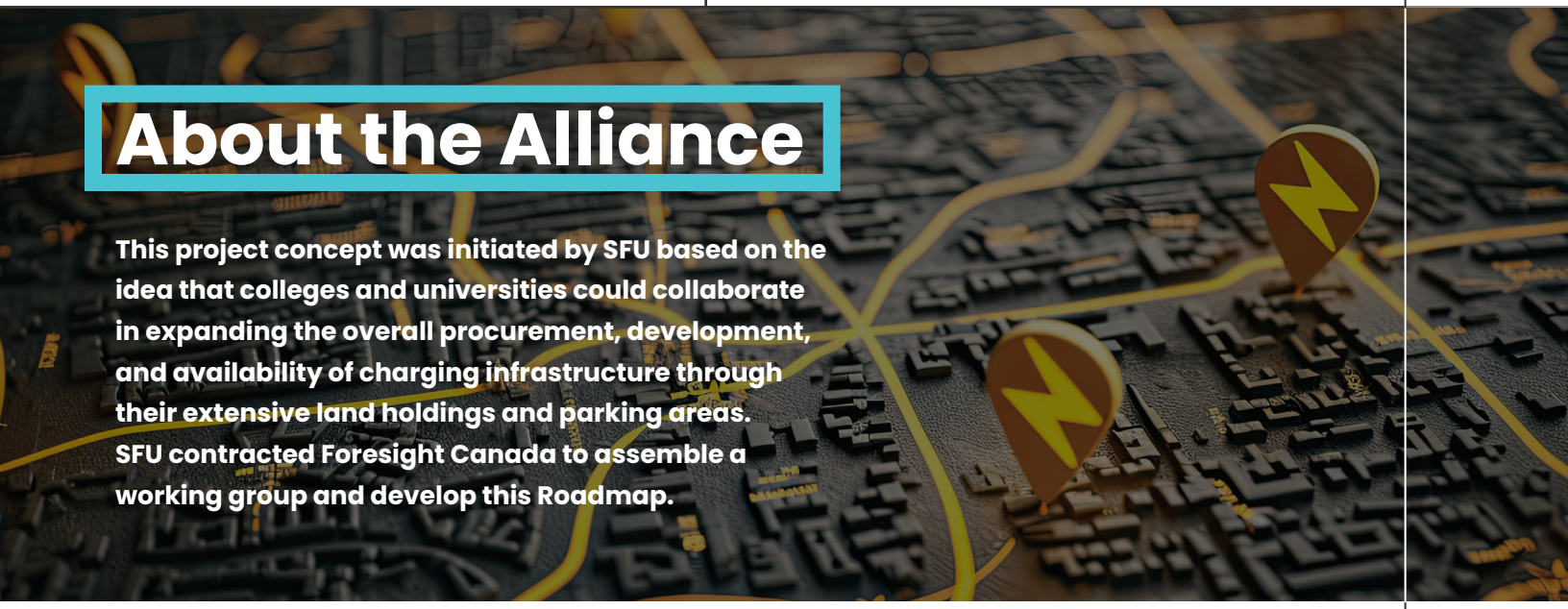
About Foresight

Foresight Canada helps the world do more with less, sustainably. As Canada's largest cleantech innovation and adoption accelerator, we de-risk and simplify public and private sector adoption of the world's best clean technologies to improve productivity, profitability, and economic competitiveness, all while addressing urgent climate challenges.

Foresight's Net Zero Innovation Network in British Columbia mitigates risk through strengthening capacity across sectors, advancing decarbonization and sustainability. Through our extensive network and active working groups, we partner with industry and collaborate with innovators, academia, government, communities, and First Nations to develop and deploy impactful projects.

Leveraging BC's powerful natural resources, BCNZIN fosters collaboration and connection across four sectors:

Mining	**Transportation**
Forest Bioeconomy	**Water**



About the Alliance

This project concept was initiated by SFU based on the idea that colleges and universities could collaborate in expanding the overall procurement, development, and availability of charging infrastructure through their extensive land holdings and parking areas. SFU contracted Foresight Canada to assemble a working group and develop this Roadmap.

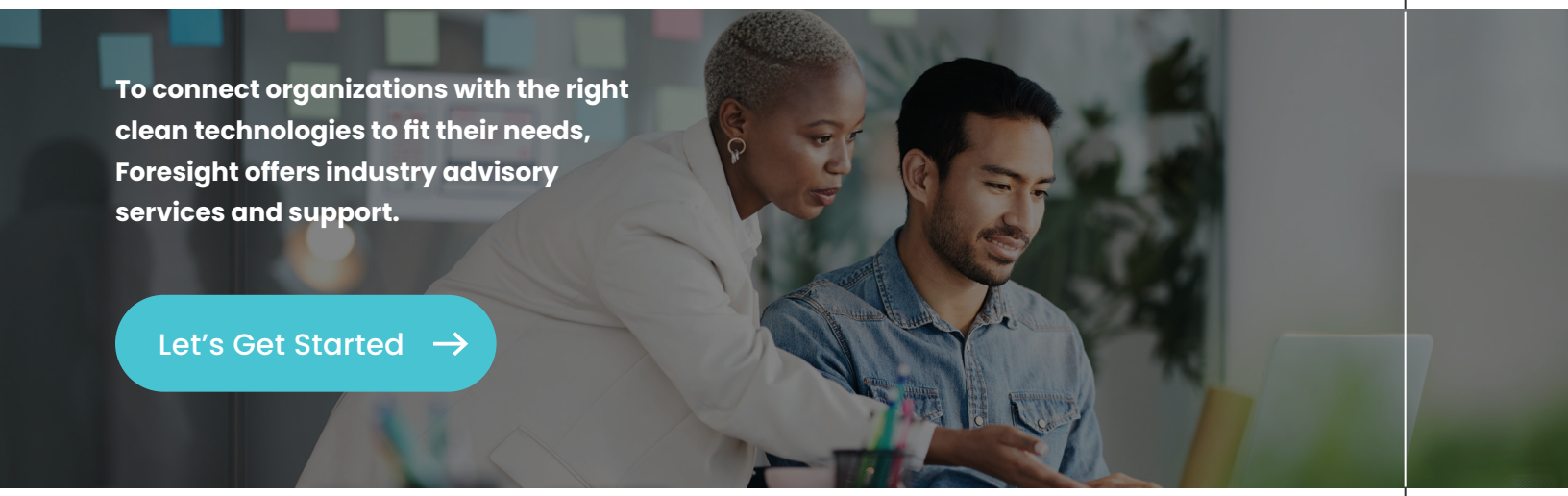
Executive Summary

This guide is designed to support financial decision-makers in evaluating EV infrastructure as a strategic investment for the BC Colleges and Universities EV Charging Alliance. We outline key technical and financial considerations in order to build and execute a compelling internal business case for investment—including the development of the EV Charger and Investment Calculator, a practical tool that enables institutions to forecast potential returns on investment and payback periods across a variety of scenarios.

The guide is preceded by a number of related reports and materials, including: 'The Alliance Roadmap'; 'Fleet Vehicles Survey Results'; and a workshop on carbon credits. Extensive questionnaires and interviews have been conducted with institutions and fleets, which inform the needs outlined in this guide. Beyond this guide, Foresight has facilitated a periodic alliance working group to advance best practices, share discoveries, and drive continued collaboration across colleges and universities.

Transportation is Canada's second-largest source of greenhouse gas emissions, surpassed only by oil and gas production.[1] As the country transitions toward electric vehicles (EVs), the demand for reliable charging infrastructure is drastically increasing. Recognizing this reality, the federal government has reintroduced a program to subsidize the development of EV infrastructure. Colleges and universities are uniquely positioned to capitalize on this shift. By leveraging existing land and parking infrastructure, these institutions can transform underutilized real estate into revenue-generating assets—obtaining new income streams through user fees and carbon credits while demonstrating a commitment to climate action and sustainability.

Joint procurement, government subsidies, and carbon credits are the backbone of this business case, along with expanding services to commercial fleets and other users. The tools we developed identify how these elements can be modified to develop implementation scenarios.



The Opportunity

Despite policy changes in the US, clean energy investments are steadily growing globally, and Canada must continue investing to remain competitive. Without sufficient charging infrastructure, consumers stay hesitant to purchase EVs. Successful EV ownership depends on accessible charging stations, consistent pricing, and the reliability of charging networks.

Provincial and federal targets for EV charging infrastructure are not being met. Academic institutions are uniquely positioned to support and play a key role in meeting these goals due to their vast land holdings, parking availability, and well-developed campuses. Shared charging infrastructure is a communal, efficient model that allows multiple drivers, including commercial fleets, to access charging stations rather than being assigned to a specific driver, enabling different drivers and vehicle types to use the same charging stations.

Campus car parks are often underutilized, particularly in the evenings, on weekends, and during holiday seasons. Increasing the availability of EV charging infrastructure and expanding public and business access can deliver both community and environmental benefits, while generating a new revenue stream for academic institutions. **The opportunities include:**

- **Providing** local communities and businesses with low-cost, reliable EV charging services.
- **Accessing** revenue through EV parking charges (user fees and fleet contracts) and carbon credits.
- **Promoting** environmental and sustainability initiatives across the university and contributing to climate action.

Many universities have some existing EV charging capabilities, with faculty, staff, and students demonstrating high demand. Chargers are often used 6-8 hours per day on average, with some locations having an even higher occupancy. Combining high demand with access for fleets that require overnight charging—this generates a clear business case for additional infrastructure and highlights an untapped revenue opportunity.

Financial Analysis and Return on Investment

This section provides a breakdown of the financial lifecycle of EV charging infrastructure in a university context, transitioning from financial barriers to long-term revenue generation. It offers insights into installation and operational costs, potential efficiencies, and various revenue streams. Furthermore, our financial model demonstrates the potential for significant return on investment.

Addressing Financial Challenges

One of the main barriers to installing charging infrastructure is the cost. This primarily includes capital expenditure (CAPEX) on hardware and labour for infrastructure installation, as well as operational costs for electricity and maintenance. Uncertainty around government grants and incentives, and volatility in the value of carbon credits can potentially make the financial impacts difficult to quantify. However, several government programs can significantly reduce CAPEX. With a clear and targeted stream of KWh dispensed, universities and colleges can generate significant carbon credits. While universities like SFU have developed strong business cases to highlight this opportunity, many have not.

This guide provides information and practical tools to support operational personnel and decision-makers in assessing EV charging opportunities and justifying potential costs. Our financial model further helps develop scenarios based on local specifications.

Optimizing Installation and Maintenance

Costs associated with procuring, installing, and operating chargers can vary significantly. **Key factors include:**

- **Electrical upgrades:** adding a new panel or transformer increases costs.
- **Distance to power source:** longer conduit runs and trenching add costs.
- **Networked vs. non-networked chargers:** smart chargers with network access and billing features cost more.
- **Brand and features:** higher-end brands (e.g., FLO, ChargePoint, ABB) cost more but offer better reliability.

Installation costs need to be considered, including: hardware, installation (labour and electrical work), permitting and inspections, network or software fees, and routine maintenance. Depending on the specific circumstances of each institution and the goals of the charging infrastructure, the upfront and maintenance costs can vary widely. They can be broadly categorized as basic, standard, or complex installations.

The EV Charger and Investment Calculator aims to provide an indication of potential costs based on variable inputs, providing greater clarity for decision-makers across various scenarios. A more detailed assessment would involve a civil engineering study of the campus to determine which installation scenario is applicable in specific cases.

Managing Costs: Opportunities for Common Procurement

BC colleges and universities have collaborated on IT services procurement for multiple years and have demonstrated significant savings through this approach. Cost efficiencies in charging infrastructure can also be achieved through volume purchases and shared procurement partnerships with other providers—especially with regard to the procurement of chargers and related technology, including software. Civil works could also potentially be reduced with joint procurement. Based on expected cost efficiencies and supplier discounts for volume purchases, reductions of around 20-50% could be achieved. We expect that a joint common procurement would significantly reduce the overall costs of this type of project. [2]

Further benefits are achieved through collaboration and partnership, including knowledge and resource sharing. For example, the carbon credit process can be complex and challenging; however, sharing expertise can streamline this. Similarly, pooling carbon credits into a single high-volume portfolio can reach minimum viable volumes for some markets, generating greater revenue and reducing the administrative burden for individual universities and colleges.

Government Funding and Incentives

Various provincial and federal programs support EV charging infrastructure and offer funding for businesses, including the Zero Emission Vehicle Infrastructure Program (ZEVIP) and the CleanBC Go Electric Program, which provide financial assistance for installing EV chargers in homes, workplaces, and public areas. Generally, these programs fund 50% or more of the total cost of charger installations. Internal budgets need to be established, as most government funding programs only partially fund projects. Recently, the government of Canada announced a renewal of the ZEVIP program and has added significant funding. [3]

Revenue Opportunities

Customers

Expanding the current customer base is key to a successful business case. There are many ways universities can build a customer base. One option is to target small or local fleets that need overnight charging facilities, as they lack access to their own depots. Long-term contracts with fleets can provide universities with consistent, reliable income, and businesses with stable pricing and reliable charging. Flat-rate fees can be offered to small businesses to encourage uptake. Signing memorandums of understanding or gauging interest with local fleets before EV charger installation can help to secure revenues in advance.

Time and budget should be allocated to awareness-building and marketing. This can be incorporated into the strategy. One tactic to build a customer base could be to initially offer free charging to develop habits and encourage uptake, followed by introducing charges for the public whilst maintaining free access for university students, faculty, and staff.

Multiple costing structures are available to accommodate different project scales and financial objectives. This includes charging per kWh, minute, or hour; charging a reservation fee; or charging an overstay or idling fee. By offering prices that are competitive, universities encourage uptake with a wider customer base.

Carbon Credits

Carbon credits will account for a significant portion of revenue from on-site EV charging. The more electricity dispensed, the more carbon credits can be generated to repay capital expenditures. Maximizing revenue can be achieved through maximizing utilization, including overnight.

In BC, two carbon credit programs can be leveraged simultaneously:

1. BC Low Carbon Fuels Standard (LCFS): Applies to the fuel supplier or site host (in this case, the entity that owns/operates the EV charger). Langara College and SFU have successfully applied for this. Forecasting EV charging energy usage can provide a rough estimate of anticipated BC LCFS carbon credits. Approximately 1,150 kWh of electricity = 1 BC LCFS Carbon Credit.
2. Canada Clean Fuel Regulation (CFR): Applies to the charging network operator (e.g., Chargepoint or Flo—operators who could collect the credits on your behalf).

A key consideration is ensuring the correct data is collected to apply for carbon credits. Universities need to allocate resources for data collection and, if necessary, third-party verification to ensure credits and revenue are obtained. Efficient and reliable data collection is also an area where joint procurement can deliver consistent, cost-effective results.

EV Charger and Investment Calculator

The EV Charger and Investment Calculator is a tool that enables universities and academic institutions to test different variables and gain a better understanding of potential costs and revenue for installing on-site EV charging stations.

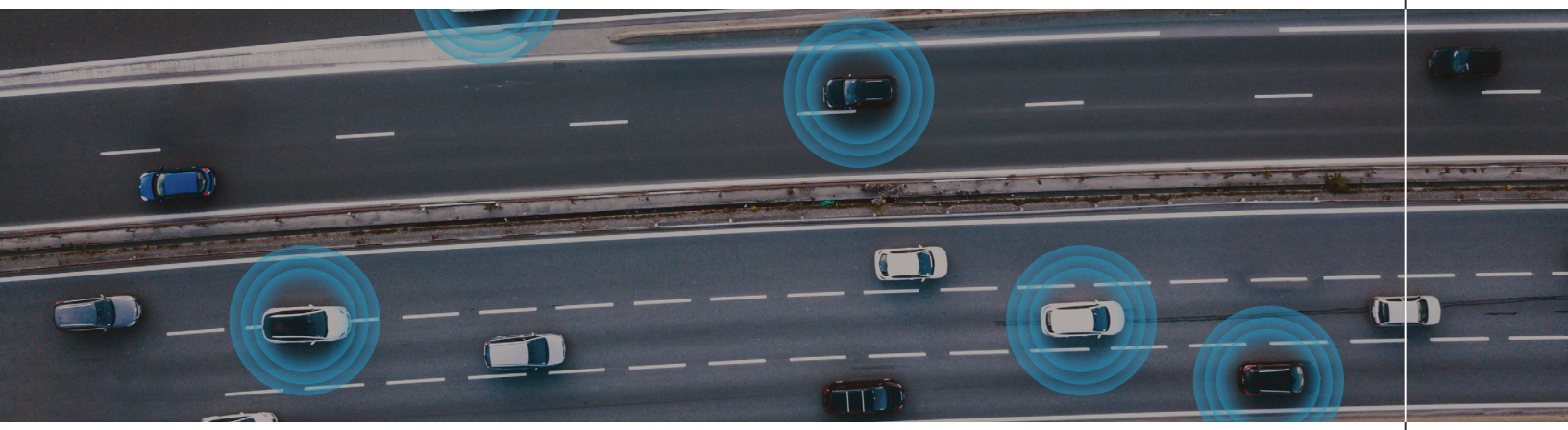
Technical Specifications and Physical Infrastructure Considerations

This section outlines the technical and physical infrastructure requirements for the successful deployment of EV charging infrastructure. Incorporating insights from the EV Alliance Working Group can reduce capital expenditure and maximize returns. It should be noted that the working group itself is a highly useful mechanism to expand technical awareness among colleges and universities.

Physical Barriers

The installation of EV charging infrastructure requires upgrades to existing car parking spaces, which may pose physical barriers for some institutions. Campuses in urban areas with limited space may have limited land available for charging stations. Aging car parks may require additional upgrades before installing charging stations, including electrical capacity and structural retrofits. The accessibility and visibility of charging locations for paying users are key considerations for determining the financial viability of an EV charging program. This is discussed further in the Site Selection and Optimizing Existing Infrastructure sections.

Grid capacity can be a hidden physical barrier to EV charging infrastructure. Comprehensive load analysis during the design and planning phase is essential. This involves assessing the total electrical demand depending on the type and number of chargers to maintain stable operations or account for any necessary electrical upgrades.



Site Selection

Ensuring the appropriate charging infrastructure location can affect the scheme's viability. Location should be optimized to minimize upgrades whilst promoting increased uptake and usage.

Key considerations:

- **Proximity to main power supply:** Placing chargers near existing substations can reduce trenching costs for cable installation.
- **Expansion potential:** Strategically developing chargers where infrastructure can be expanded.
- **Safety:** Whether chargers are inside or outside a parkade can affect use; for example, users may be reluctant to use chargers in poorly lit parkades at night.
- **Accessibility:** Installing chargers near building entrances or main roads, where consumers can easily find them, supports passive visibility and uptake. Charging stations should also accommodate all users.

Greater benefits can be derived from EV charger installations that fill gaps in the network, particularly in rural and remote areas and on major highways. The interactive EV Charger Asset Map (pictured below) shows parking lots on university and college campuses in BC and the potential for a coordinated network of charging stations.

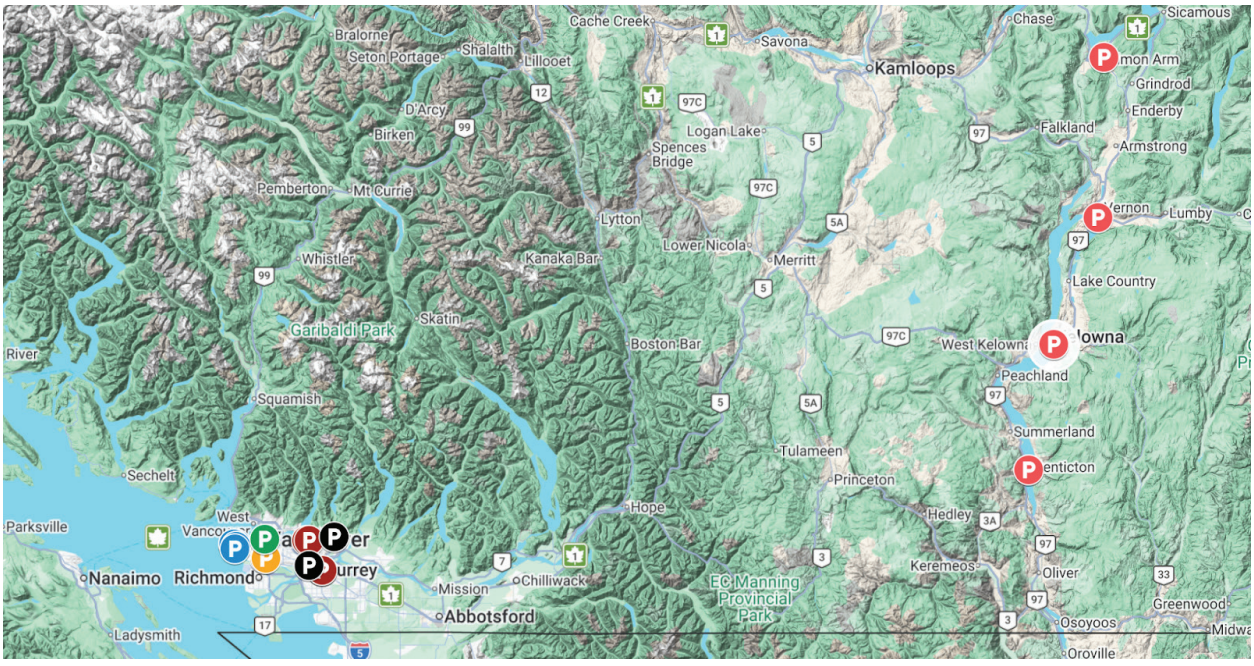


Figure 1. BC EV Charging Alliance Infrastructure Asset Map.

Technical Requirements

Understanding the differences between types of EV chargers is essential for any organization that is evaluating infrastructure options for fleet electrification. Charger options vary based on numerous factors, including voltage, installation requirements, use cases, range, and cost. The table below gives a detailed breakdown of charger options.

Table 1: EV Charger Options

Options	**Level 1**	**Level 2**	**Level 3** (Fast Charger)
Input	120 V	208/240 V	480 V
Outlet type	Standard electrical outlet (e.g., a phone charger)	Special electrical outlet (e.g., a stove or dryer plug)	DC outlet (not found in homes)
Time to charge	8-50+ hours	4-10 hours	25-30 minutes
Range (per hour of charging)	3 km to 8 km	16 km to 50 km	Up to the maximum driving range of vehicle
Typical uses	Home charging and back-up situations	Home charging, charging at businesses and public spaces	Charging at dedicated stations, public spaces, and highway corridors

Key considerations:

- **Maintenance costs:** Maintenance is a recurring operational expense. Chargers with modular components are easier to repair than sealed units. Chargers that comply with OCPP (Open Charge Point Protocol) prevent vendor lock-in and allow owners to switch maintenance providers if costs become too high.
- **Data availability:** High-quality software provides automated, real-time data enabling universities to implement "peak shaving" to adjust charging speeds in line with demand. Universities can also gain insights into power usage and easily obtain the data needed for carbon credits and the associated revenue.
- **Standardization:** Using standardized software across campuses can encourage adoption and streamline the user experience. If universities coordinate through an alliance approach, standardization enables streamlined data collection, which can be beneficial in obtaining carbon credits.

Making the Case for Additional Benefits

Universities and academic institutions have multiple competing priorities and business imperatives. While we have outlined the potential financial benefits and return on investment associated with EV charging, this section outlines the broader environmental, social, and macroeconomic benefits that can be achieved through a targeted, long-term, strategic EV infrastructure upgrade plan. A well-structured business case considering these elements ensures alignment with the specific evaluation criteria of provincial and federal funding agencies.

Driving Environmental and Sustainability Action

Students are increasingly concerned about climate change—a survey in Canada showed that 80% of post-secondary students feel that environmental sustainability should be a key consideration for all universities and colleges. [2] Installation of EV charging infrastructure and broader support for EV adoption can demonstrate that universities are committed to climate action. Installing EV charging infrastructure provides a high-visibility opportunity for universities and colleges to drive their own environmental and sustainability goals whilst also supporting the government's public charging targets. While this has served as a longstanding rationale for EV infrastructure, it should be noted that, without a significant return on investment, it is insufficient to justify additional investments to meet provincial and national objectives. The BC government aims to reach 10,000 public chargers by 2030; however, only 6,500 have been commissioned to date. Based on current parking and real estate availability, it is estimated that a BC College and University Alliance could contribute 1,500 charging ports to this objective. [2] Along with the potential financial benefits, this can help gain buy-in from key decision-makers.

Improving the availability of reliable EV charging infrastructure can address the barriers highlighted by EV consumers and businesses, such as range anxiety, operational downtime, and consistent charging pricing. The adoption of EVs provides consumers with fuel cost savings, reduces air pollution, and lowers harmful greenhouse gas emissions. Increasing EV adoption directly reduces Scope 3 carbon emissions for academic institutions by decarbonizing faculty, staff, and student commutes.

Sustainability and green skills are in growing demand, and on-site EV chargers can be used by students for research and innovation. Students can access data, determine real-world impacts, and analyze insights.

Support Local Businesses

Transportation is responsible for 25% of Canada's greenhouse gas emissions, with commercial vehicles accounting for 65% of that.

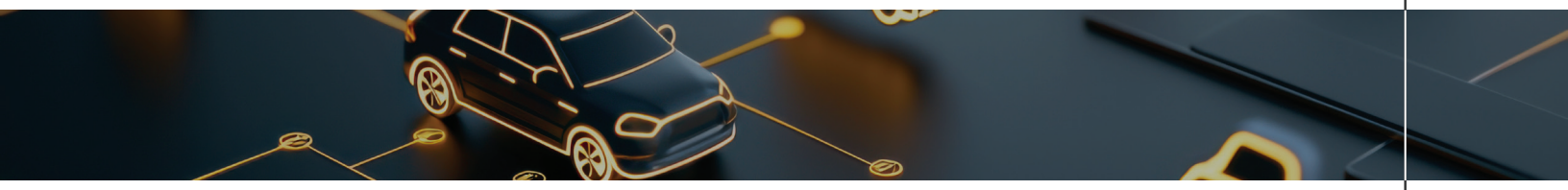
Canada's cities are experiencing a rise in commercial vans and trucks, particularly in last-mile delivery that caters to the convenience of online shopping and same-day delivery.

Government incentives, rising consumer demand for lower-carbon transportation of goods, and an estimated 30-40% average reduction in operating costs after EV adoption are driving businesses to consider transitioning their fleets.[4] However, barriers to adoption persist, particularly range anxiety and inconsistent charging availability.

A survey of fleet operators conducted by Foresight in December 2025 revealed that they face additional challenges in ensuring charging time does not disrupt business operations. In addition, limited access to park and charge overnight is a concern—particularly for organizations without a depot, such as small landscaping businesses, maintenance crews, or property management companies. The survey found that just under half of the respondents' park their vehicles at public depots or on public streets when not in use. This demonstrates an opportunity for alternative EV parking and charging solutions, such as third-party sites. In particular, universities that form long-term business partnerships with local companies can provide consistent and reliable EV charging speeds and pricing. The broad-based industry support for this sector provides an additional strategic advantage for the business case.

Optimize Existing Infrastructure

Many universities already have some basic EV charging units, but without a clear strategic direction and management, revenue opportunities are being left untapped. An additional advantage of university car parks is that they are often directly controlled by institutions. This removes the need for third-party approvals, enabling faster deployment and opportunities to set pricing tailored to university members or the public. Larger universities in centralized locations have the potential to reach a wide customer base, with on-site hospitals, recreational facilities, and high residential density, whereas at-home charging capabilities may be lacking. Additionally, institutions that host public events, such as sporting events, lectures, and conferences, can demonstrate their commitment to sustainability through marketing and advertising while offering convenience to the general public and the local community.



CASE STUDY: SIMON FRASER UNIVERSITY (SFU)

SFU has adopted a public, mixed-use charging philosophy, investing in 16 EV chargers (32 ports), available to anyone.

Strategically placing chargers where they are most convenient and accessible to different demographics increases uptake. For example, in one location, the chargers are located between an academic building (students and faculty, 9:00 a.m. to 5:00 p.m. usage), a commercial high street (customers, weekend usage), and a university residence (overnight charging).

Carbon credits are the main revenue generator for SFU's chargers. Since credits are awarded for kWh dispensed under the BC LCFS, SFU understands that increasing the amount of energy dispensed for charging is key. Estimated charger usage can be determined from two key performance indicators:

1. **Average Length of Stay** (i.e., how long a car stays parked)
2. **Turnover** (i.e., how many cars occupy one parking space in a day)

The following table outlines an estimate of costs based on SFU's experience.

CASE STUDY: SIMON FRASER UNIVERSITY (SFU)

Table 2: Mock Usage & Revenue Scenario for Single 2-Port Level 2 Charger

Equipment and Installation Costs	**Est. Total/ Yr**
Level 2 charger with 2 ports at 7.2 kWh Max (no grants or subsidies)	$10,000
Install costs	$10,000
Subtotal	$20,000
Usage	
8 hours per day of charging at 6 kWh (=17,520 kWh) x 2 ports	35,040 kWh
Carbon credit equivalent	30.5 carbon credits
Income Sources	
Carbon credits - BC LCFS premium of $0.20/ kWh (assumes carbon credits, priced at $220 based on averages)	$6,710
Carbon credits - 3rd-party aggregator	($671)
Other EV charger revenue streams	TBC
Potential federal / provincial /BC Hydro grants and subsidies	TBC
Subtotal	**$6,039**
= Payback time of 3.3 years, including only carbon credit revenue	

Since the initial drafting of this business case, and at the time of writing, the BC LCFS market price has shifted to around $100 per credit. Therefore, SFU is now actively pursuing credits under the Canadian CFR.

CASE STUDY: SIMON FRASER UNIVERSITY (SFU)

Lessons Learned:

1. **Identify the "magic number" of chargers** based on the existing electrical supply and infrastructure to avoid costly electrical upgrades whilst maximizing the number of revenue-generating charging points.
2. **Explore suppliers to identify cost savings** when buying infrastructure, particularly if government incentives are unavailable.
3. **Maximize EV charger utilization by prioritizing locations** where stakeholders will park during the day (faculty/staff/students), evenings and overnight (nearby strata and commercial districts), and weekends (community events and extracurricular activities).

Challenges:

1. **Volatility** in the value of carbon credits
2. **Carbon credit application** processing is slow in BC, taking around 6 months
3. **Uncertainty** about the future of subsidies and grants
4. **In-house** installation costs

Opportunities:

1. **Potential** to claim the Canadian Clean Fuel Regulations (CFR)
2. **Competition** amongst carbon credit aggregators offers opportunities for access to high-value markets and greater revenue generation
3. **Potential** to develop a new parking customer base and customer habits

Conclusion

The increasing demand for EV infrastructure across Canada presents an opportunity for universities and colleges to generate additional revenue while providing community and environmental benefits. Case studies demonstrate that through strategic planning and the optimization of existing resources universities can achieve short payback periods. This could be further reduced by requiring customers to pay a fee, securing partnerships with local businesses, and tapping into a wider EV charging customer base beyond students, faculty, and staff. A proactive approach not only signals universities as sustainability leaders but also captures revenue that would otherwise be lost to competing providers. Universities have an opportunity to become primary providers of EV charging for local communities and businesses, provided they develop solid operational business cases to justify the required investments.

Appendix 1: Table of Suppliers

This table provides examples of suppliers and partners that can support academic institutions in the deployment of EV charging networks across Canada. This list represents a selection of industry players and is non-exhaustive.

ROLE					
Supplier Name	**Hardware**	**Software**	**Integrators**	**Project Manager**	**Carbon Credit Managers / Accountants**
	Designs, engineers, and manufactures physical charging units.	Manages back end of the charging system and front end of the user mobile app.	Packages hardware, software, and electrical services to meet site-specific needs.	Oversees deployment of EV charging lifecycle, including feasibility studies, permitting, managing rebate programs.	Collects carbon data from small users to bundle carbon credits and sell for increased value.
FLO	x	x			x
Grizzl-E	x	x			x
Hypercharge	x	x			
ChargePoint	x	x			
Electrify Canada	x				
metroEV	x	x	x		
EV Connect Canada		x			
BGIS			x	x	
SWTCH Energy		x			
ChargeLab		x			x (Rewards Program)
Leading Ahead Energy			x		
Foreseeson EVSE			x		
Electric Advantage			x		x (Through Carbex)
Carbex Carbon Credit Exchange Corp					x

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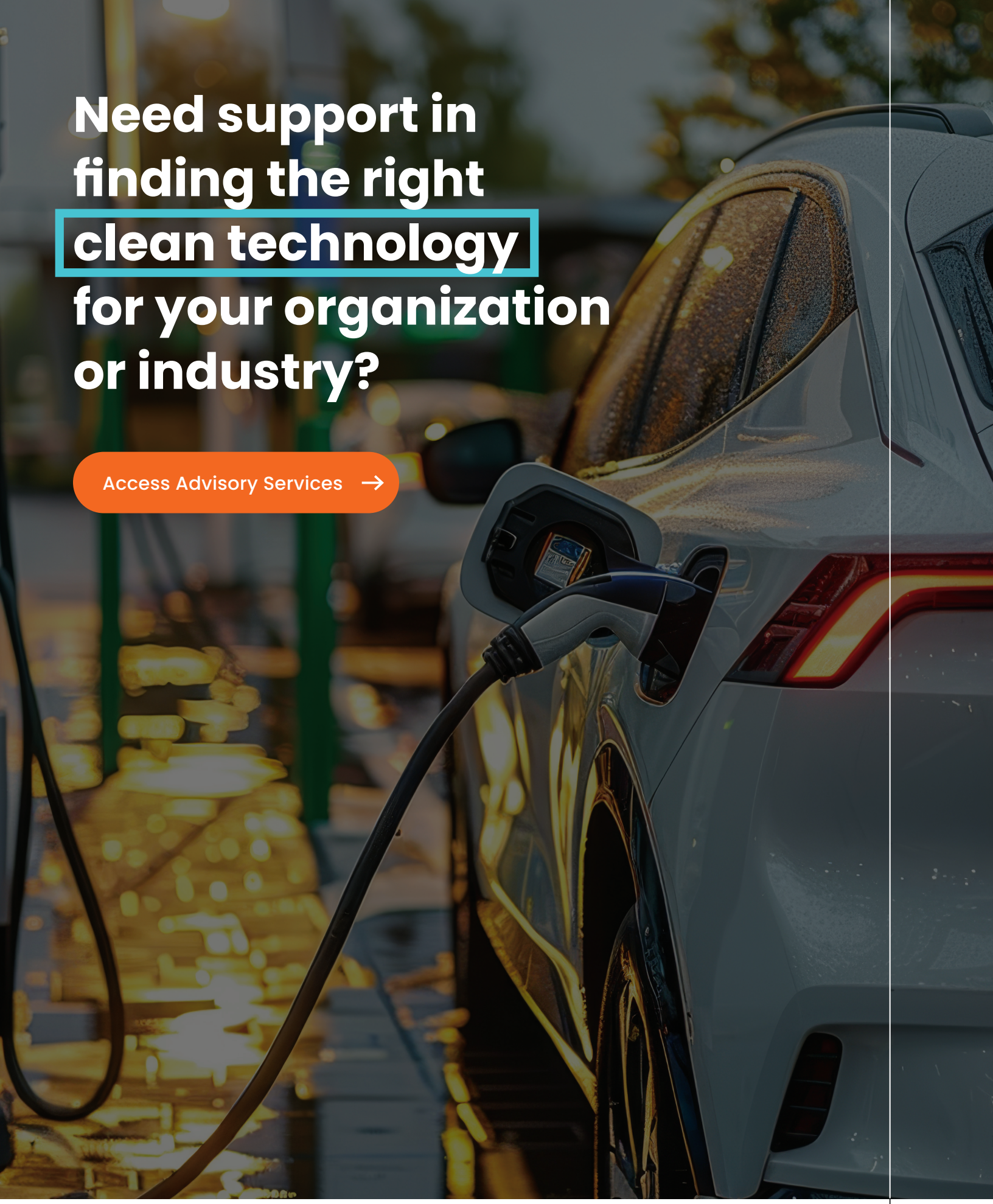
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Access Advisory Services