
## Public EV Charging in Canada:

# Evolving Pricing Practices and User Experience

Implementing Partners:

Pollution Probe

Mobility Futures Lab

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# About

**Pollution Probe**

Pollution Probe is a Canadian charitable environmental organization that is a leading agent of change at the intersection of communities, health and environment. Since 1969, we have been defining environmental problems through research, promoting understanding through education and pressing for practical solutions through advocacy. Pollution Probe has a proven track record of working in successful partnership with industry and government to develop practical solutions for shared environmental challenges.

Pollution Probe is one of Canada's leading independent transportation solution providers. Our work supports aggressive actions to address climate change and reduce air pollution while promoting job creation and economic growth. In addition to projects, we actively contribute to expert transportation committees and working groups at local, regional, national and global levels. We are technology neutral and work collaboratively with a wide variety of stakeholders to develop transportation decarbonization solutions across all modes.

**Mobility Futures Lab**

Mobility Futures Lab is a leading sustainable transportation consulting firm that is at the forefront of innovation and research in the field of mobility. The firm's services are designed to help clients navigate the complex landscape of sustainable transportation, with a focus on proprietary software tools and data-driven solutions. Our approach is based on a deep understanding of the interconnections between transportation, energy, and the environment.

**Acknowledgements**

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We would also like to thank the advisory committee for this project, which included charging station operators, EV associations, and other stakeholders whose insights and contributions were invaluable to the development of this work.

# Table of Contents



**List of Acronyms**

**AC** – Alternating Current
**CCS** – Combined Charging System
**CHAdeMO** – CHArge de MOve (a DC charging standard developed in Japan)
**DC** – Direct Current
**DCFC** – Direct Current Fast Charger
**EVC Rate** – Electric Vehicle Charging Rate
**EV** – Electric Vehicles
**EVSE** – Electric Vehicle Supply Equipment
**ISED** – Innovation, Science, and Economic Development Canada
**J1772** – North American standard Level 2 charging connector
**J3400 / NACS** – North American Charging Standard
**kWh** – Kilowatt Hour
**L2** – Level 2 Charging
**L3** – Level 3 Charging
**MURBs** – Multi-Unit Residential Building
**NB Power** – New Brunswick Power Corporation
**NRCan** – Natural Resources Canada
**OEB** – Ontario Energy Board
**OEM** – Original Equipment Manufacturer
**TOU** – Time of Use (electricity pricing)
**ZEV** – Zero-Emission Vehicle
**ZEVIP** – Zero-Emission Vehicle Infrastructure Program

# Executive Summary

As Canada accelerates toward transportation decarbonization, public electric vehicle (EV) charging infrastructure plays a critical role in enabling mass adoption of zero-emission vehicles. Ensuring that this infrastructure is accessible, affordable, and easy to use for all Canadians requires not only scaling of charging infrastructure but also the development of fair, consistent, and transparent pricing practices. This report examines the current state of public EV charging pricing across Canada, identifies key challenges, and offers actionable recommendations to improve user experience, support equitable access, and enhance operator sustainability.

The distribution of public charging stations in Canada reflects distinct deployment patterns for Level 2 (L2) and Level 3 (L3) chargers. L2 stations are primarily installed by non-centralized site hosts—such as municipalities, businesses, and institutions—especially in provinces like Ontario, Alberta, and British Columbia, where these actors operate over 80% of L2 ports. Québec stands apart, with utility-run Circuit Électrique operating most L2 chargers, illustrating the impact of coordinated public investment. In contrast, L3 fast charging is more capital-intensive and is often led by centralized actors like automakers, utilities, and fuel retailers. These networks typically offer broader geographic coverage and more consistent pricing models, though non-centralized hosts continue to play a key role in underserved areas.

For consumers, public charging prices can fluctuate significantly depending on billing methods (e.g., per kWh or per minute), session and idle fees, local electricity tariffs, and site-specific cost structures. These differences can make charging costs unpredictable, though challenges are beginning to be addressed. For example, kWh-based billing is expanding, roaming agreements are improving network interoperability, and new electricity rate designs are being implemented in certain provinces to reduce the financial risk for operators.

Insights from stakeholders including charging network operators, government agencies, and EV advocacy groups underscore both the progress and remaining gaps in pricing regulation.

Operators face significant cost recovery challenges in low-utilization areas and call for EV-specific electricity rates and clearer national policy guidance. Meanwhile, EV drivers continue to prioritize transparent pricing, simplicity, and reliable access, particularly those in multi-unit residential buildings who lack home charging and depend on affordable public options.

To improve pricing consistency and support a seamless national charging network, this report makes five key recommendations:

**1 Ensure pricing consistency, transparency, and accessibility across networks**
Promote kWh-based billing, standardized idle and session fee policies, clear cost displays, and greater roaming interoperability to support consumer trust and convenience.

**2 Review electricity tariffs and cost allocation policies to support sustainable charging infrastructure deployment**
Introduce EV-specific commercial rate classes and revise utility cost-sharing frameworks to reduce risk for operators, especially in low-demand or rural areas.

**3 Address interprovincial regulatory fragmentation**
Harmonize key policies related to metering, tariffs, and charger certification to enable cross-border interoperability and streamline infrastructure deployment.

**4 Differentiate support strategies for L2 and L3 charging**
Support decentralized L2 deployment through streamlined funding and permitting, while targeting centralized L3 investments to high-impact corridors and high density urbans areas.

**5 Implement a monitoring framework to link station usage, pricing, and investment needs**
Track how pricing, idle fees, and reliability affect station utilization, using real-world data to guide future charging investments and ensure infrastructure is deployed where it delivers the greatest value.

# 1 Introduction


Electric vehicle (EV) sales in Canada reached an average of 15% of total vehicle sales in 2024, reflecting growing adoption nationwide.[1] The Electric Vehicle Availability Standard, introduced in December 2023 with mandatory zero-emission vehicles sales targets of 20 % by 2026, 60 % by 2030, and 100 % by 2035, is now under review as of September 2025, with the 2026 target suspended and longer-term goals under review. While regulatory uncertainty remains, the broader transition to electrification continues, albeit at an uneven pace.[2]

As EV adoption accelerates, public charging infrastructure will play an increasingly important role in supporting EV ownership. Surveys of current EV owners reveal varied reliance on public charging: those with access to home charging typically use public stations for long-distance trips, while those without rely on them more heavily for day-to-day needs.[3] To meet these diverse user needs and promote continued adoption, public charging prices must be predictable, transparent, and consistent.

1 Electric Autonomy Canada (2025). 2024 EV sales in Canada. Retrieved from: https://electricautonomy.ca/data-trackers/ev-sales-data/2025-03-13/statscan-q4-2024-ev-sales-canada/

2 Environment and Climate Change Canada (2023). Canada's Electric Vehicle Availability Standard (regulated targets for zero-emission vehicles). Retrieved from: https://www.canada.ca/en/environment-climate-change/news/2023/12/canadas-electric-vehicle-availability-standard-regulated-targets-for-zero-emission-vehicles.html?utm_source=chatgpt.com

3 Pollution Probe (2025). 2024 EV Charging Experience Survey. Retrieved from: https://www.pollutionprobe.org/pollution-probe-2024-canadian-electric-vehicle-owner-charging-experience-survey-report/

The growth of the EV market has spurred investment in charging infrastructure from a wide range of stakeholders, including automakers, utilities, municipalities, and businesses of all sizes. This has resulted in a decentralized network, with varying pricing structures among different charging station operators. These operators objectives also differ, some aim to generate profit, while others seek only to recover installation and maintenance costs.

The cost to deploy charging stations depends on factors such as grid capacity, site layout, and charger type. Larger, centralized networks can offer consistent pricing by spreading costs across multiple locations, whereas smaller or decentralized operators often set prices based on site-specific factors. These structural differences, combined with variation in provincial electricity tariffs, regulatory oversight, and cost-recovery mechanisms, contribute to a patchwork of pricing practices across Canada.

Pollution Probe, in partnership with Mobility Futures Lab, received funding from Innovation, Science and Economic Development Canada (ISED) to examine the consumer experience with public EV charging pricing in Canada. The project includes this report and the interactive ChargeCompare tool, which allows users to explore pricing models, operator types, and charging infrastructure by province.[4] Together, these resources aim to support consumers and policymakers in understanding how the sector is evolving and to promote greater transparency in pricing practices.

**To meet these diverse user needs and promote continued adoption, public charging prices must be predictable, transparent, and consistent.**

This report begins with an overview of charging station types and their distribution across Canada, providing context for the public charging landscape. It then examines the main categories of public charging network operators and the pricing approaches they employ, followed by a discussion of the economic and regulatory factors that shape deployment and pricing decisions. Subsequent sections integrate insights from network operators, government bodies, and EV consumer associations to highlight challenges and opportunities in building a more consistent, accessible, and user-friendly charging network. The report concludes with recommendations to promote fair and transparent pricing practices nationwide.

4 Mobility Futures Lab (2025). ChargeCompare. Retrieved from: https://chargecompare.mobilityfutureslab.ca/

# 2 Overview of Public EV Charging Infrastructure in Canada

## 2.1 Charger Levels and Connector Types

Public EV chargers in Canada fall into two main categories (summarized in **Table 1**): Level 2 (L2) alternating current (AC) chargers and Level 3 (L3) direct current fast chargers (DCFC). These charging levels differ in power output, installation costs, and charging speeds.

L2 AC charging provides between 7 kW and 19 kW of power, typically recharging an EV in 4 to 10 hours and uses the following connectors:

- **J1772:** The North American standard for most EVs, including Japanese models.
- **J3400 North American Charging Standard (NACS)**: Originally developed by Tesla; Tesla vehicles can also use an adapter to access J1772 stations.

L3 DC fast charging delivers between 50 kW and 500 kW of power, enabling most EVs to charge within 20 minutes to 2 hours, using the following connectors:

- **Combined Charging System (CCS):** Common among North American and European automakers. The CCS builds on the J1772 design with added DC pins.
- **CHAdeMO:** Previously favored by Japanese automakers, requiring a separate port alongside the L2 J1772 connector.
- **J3400 NACS:** Originally developed by Tesla, this connector supports both L2 AC and L3 DC fast charging. As of 2025, it has been widely adopted by other automakers as the emerging North American standard.

**Table 1. Comparison of public EV Charging Standards and Compatibility.** [6]

| | Level 2 Alternating Current Charging | | Level 3 Direct Current Fast Charging | | |
|---|---|---|---|---|---|
| Typical use cases | Public charging at workplaces, shopping malls, overnight parking lots | | Highway rest stops for long-distance trips, grocery stores | | |
| Power output | 7 to 19 kW | | Up to 500 kW | | |
| Charging speed (range added) | 16 – 50 km per hour | | 160 – 320 km per 30-minute charge | | |
| Charging time from empty[7] | 4 – 10 hours | | 20 minutes – 2 hour | | |
| Charger connector |  |  |  |  |  |
| Charging standard | J1772 | NACS J3400 | CCS | NACS J3400 | CHAdeMO |

Notes: All values and connector types reflect the North American context.

The choice of charging connector directly affects vehicle compatibility with the public charging network. Until early 2023, CCS was the dominant DCFC standard in North America and Europe, while CHAdeMO remained common for some Japanese EVs. However, the landscape is shifting with Tesla opening its Supercharger network and major automakers announcing support for J3400 NACS, signaling a transition toward a more unified connector standard.[5]

Installation costs vary by charging level due to differences in hardware, siting needs, and grid capacity. These costs, in turn, influence public charging pricing, with higher-powered stations often incurring greater setup expenses, but enabling faster charging and higher throughput for operators.

5 Electric Autonomy Canada (2023). A complete guide to NACS adoption by EV charging networks in Canada. Retrieved from https://electricautonomy.ca/charging/2023-12-05/guide-nacs-adoption-charging-networks-canada/

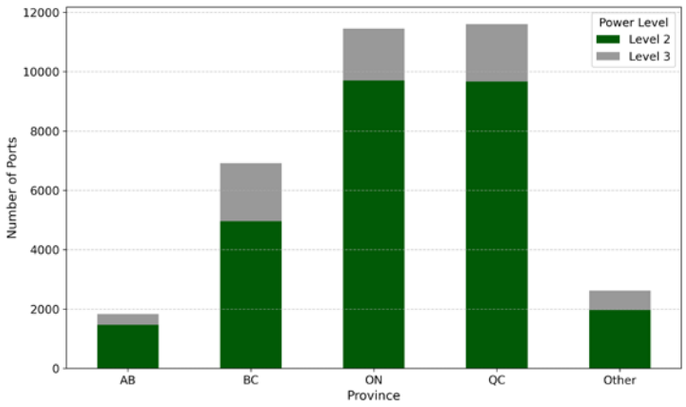
6 US Department of Energy (2025). Alternative Fuels Data Center. Electric Vehicle Charging Stations. Retrieved from: https://afdc.energy.gov/fuels/electricity-stations

7 Charging speed varies based on battery capacity and state of charge at the time of charging.

### 2.2 Provincial Distribution of Charging Stations

The number of public EV charging ports in Canada is growing. A charging station refers to a location where one or more charging ports (individual connectors that can charge a vehicle) are installed. As of May 2025, there were approximately 34,500 public charging ports nationwide, with L2 chargers accounting for 80% of the total and L3 DCFC chargers comprising the remaining 20% (**Figure 1**).

**Figure 1 :**
**Public Level 2 and Level 3 Charging Ports by Province (May 2025) .**[8]




L2 chargers represent the majority of public charging ports in all provinces, though proportions vary. Québec and Ontario both report 84% of their public ports as L2. Alberta follows closely at 80%, while British Columbia has a comparatively lower share at 73%. The combined group of remaining provinces ("Other") sits at 76%. Across Canada, this reflects continued investment in workplace and community-based L2 stations, alongside the strategic deployment of L3 fast chargers. The higher capital and installation costs of L3 chargers likely contribute to their lower proportion in the overall mix.

To better understand user experience, Pollution Probe's 2024 Canadian EV Charging Experience Survey asked respondents to rate their agreement with the statement:

**"The pricing of public EV charging is consistent across different locations."**

Responses showed significant provincial variation:

- **46 %** of EV drivers in Québec disagreed with the statement,
- **67 %** in British Columbia,
- **70 %** in Ontario, and
- **78 %** in other provinces.

Despite similar proportions of L2 and L3 stations across provinces, EV owners in Québec perceive greater pricing consistency. One possible explanation lies in the structure of provincial charging networks. In regions where a few dominant operators provide the majority of public charging, pricing structures may be more standardized. In contrast, provinces with a more fragmented mix of providers may experience greater variation in pricing, contributing to user perceptions of inconsistency.

A closer look at network operators and their pricing models across provinces is provided in Sections 3 and 4.

8 Natural Resources Canada (2025). Electric Charging and Alternative Fuelling Stations Locator. Retrieved from: https://natural-resources.canada.ca/energy-efficiency/transportation-energy-efficiency/electric-charging-alternative-fuelling-stationslocator-map#/find/nearest

9 Pollution Probe (2025). 2024 EV Charging Experience Survey. Retrieved from: https://www.pollutionprobe.org/pollution-probe-2024-canadian-electric-vehicle-owner-charging-experience-survey-report/

# 3 Charging Station Operators and Network Models

## 3.1 Network Types and Key Operators in Canada

Canada's public EV charging ecosystem comprises a wide range of networks with diverse ownership models (public, private, or public-private partnerships), business strategies, and geographic coverage. A charging network refers to a system of charging stations operated, branded, or managed by a single entity, offering a unified user experience in terms of access, pricing, and services.

Some networks are centrally managed, with standardized pricing, maintenance, and service policies. These are typically operated by utilities, automakers, or major corporations. Others follow a non-centralized model, in which site hosts—such as municipalities, businesses, or property managers—own the stations and control pricing, while relying on technology and back-end services from charging solution providers.[10]

EV charging networks in Canada can generally be grouped into four main categories:

- **Centralized Utility-Backed Networks:** Operated by utilities, often with public funding support.
- **Centralized Automaker-Backed Networks:** Developed by automakers to support vehicle owners.
- **Centralized Fuel/Retail Integrated Networks:** Operated by fuel retailers or commercial brands, with charging stations co-located at gas stations or retail sites.
- **Non-Centralized Site-Host Networks:** Managed by site hosts (businesses, municipalities, property managers) using platforms provided by EVSE (Electric Vehicle Supply Equipment) providers.

10 C40 Cities Climate Leadership Group. EV charging infrastructure: Business models and city case studies. Retrieved form: https://www.c40knowledgehub.org/s/article/EV-charging-infrastructure-Business-models-and-city-case-studies?language=en_US

**Centralized Utility-Backed Networks**
These networks are owned and operated by utilities and often supported by public funds or rate-based investments. The utility manages pricing and station operations directly. Such networks are especially valuable in regions where private sector charging investment is limited.

Examples:
- **BC Hydro EV Network:** Operated by BC Hydro, includes both L2 and L3 chargers located across British Columbia.
- **Circuit Électrique:** Managed by Hydro-Québec, offering an extensive network of L2 and L3 chargers throughout Québec.
- **Ivy Charging Network:** A joint initiative of Hydro One and Ontario Power Generation, primarily offering L3 DCFC across Ontario's highway corridors.
- **eCharge:** Operated by NB Power, with both L2 and L3 chargers offered across New Brunswick.

**Centralized Automaker-backed Networks**
These networks are developed or backed by automakers, often to improve the charging experience for their customers. While some may be exclusive to specific vehicle brands, others are open to all EV drivers. Charging sites may be located along travel corridors or integrated into urban and commercial areas.

Examples:
- **Tesla Supercharger & Destination Charger Network:** Operated by Tesla, this is the largest automaker-associated network in Canada. It includes both L3 DCFCs along major routes and L2 chargers at destinations such as hotels and retail locations. While originally exclusive to Tesla drivers, select L3 sites are now accessible to non-Tesla EVs.
- **Electrify Canada:** Launched by Electrify America (with Volkswagen Group as an investor), Electrify Canada is a brand-neutral network operating L3 DCFCs in several provinces.

**Centralized Fuel/Retail Integrated Networks**
These networks involve fuel retailers and large commercial brands installing EV chargers at existing gas stations, convenience stores, or retail locations, often to attract customers and offer added services during routine stops.

Examples:
- **Petro-Canada EV Fast Charging:** Operated by Suncor, offering L3 DCFC at select Petro-Canada gas stations across Canada.
- **Shell Recharge:** Operated by Shell, L3 DCFC installed at Shell fuel stations in multiple provinces, focusing on high-traffic and highway corridor locations.
- **On the Run EV:** Operated by Parkland Corporation, deploying L3 DCFC at On the Run and Chevron-branded fuel stations in British Columbia, Alberta, Ontario, and Quebec.
- **Couche-Tard (Circle K):** Operated by the Québec-based convenience chain, integrating L3 DCFC at Circle K sites in urban and suburban locations across several provinces.

**Non-Centralized Site-Host Networks:**
In non-centralized networks, chargers are typically owned and managed by site hosts—such as businesses, municipalities, and property managers—who control pricing, station access, and maintenance. These site hosts use hardware and cloud-based software provided by third-party EVSE providers such as FLO or ChargePoint.

In a limited number of cases, EVSE providers also own and operate stations directly, usually under long-term land leases. However, this represents a small share of their total footprint. The primary revenue model for companies like FLO and ChargePoint comes from hardware sales, software subscriptions, and transaction processing fees rather than charging session revenue.

By enabling decentralized deployment and site-level control, these networks support flexible and locally tailored infrastructure development across Canada.

### 3.2 Operator Distribution by Province

**Figures 2 and 3** show the distribution of public EV charging ports by operator type across provinces for L2 and L3 chargers, respectively. This analysis is based on data from Natural Resources Canada's (NRCan) Alternative Fuelling Station Locator, which compiles information on publicly accessible charging stations across Canada.[11]

**Figure 2** reveals that Non-Centralized Site Hosts dominate the L2 market across most provinces. They account for over 80% of L2 charging ports in Alberta (87%), British Columbia (91%), Ontario (89%), and in the combined "Other" provinces (84%). Québec is the only exception, where Non-Centralized Site Hosts represent just 36% of L2 ports.

This widespread dominance reflects the decentralized nature of L2 deployment, where a wide range of site hosts—including businesses, municipalities, and property managers—install and manage chargers using platforms like FLO, ChargePoint, or SWTCH. The relatively low capital and installation costs of L2 infrastructure makes it more accessible to these site hosts, especially in urban areas and at workplaces, shopping centers, and public parking facilities.

While many non-centralized sites use roaming-enabled software, pricing authority remains with individual site hosts, resulting in inconsistencies in session fees, idle charges, and access policies—even within the same branded network. This variability poses a challenge to transparency and user experience.

Utility-backed networks play a leading role only in Québec, where 59% of L2 ports are operated by Hydro-Québec's Circuit Électrique. In all other provinces, utility-backed deployments are marginal, accounting for under 7% of L2 ports.

Automaker-backed networks represent a modest but notable share of L2 infrastructure, with Alberta showing the highest proportion (13%), followed by Ontario (10%) and the "Other" provinces (9%). These deployments typically involve destination charging at dealerships, service centers, or branded retail locations. Fuel/Retail-Integrated networks are largely absent from the L2 space, with shares below 1% in all provinces. This reflects a strategic focus on higher-powered highway corridors where faster turnaround is needed.

**Figure 2: Distribution of Level 2 Public Charging Ports by Operator Type and Province (May 2025)**

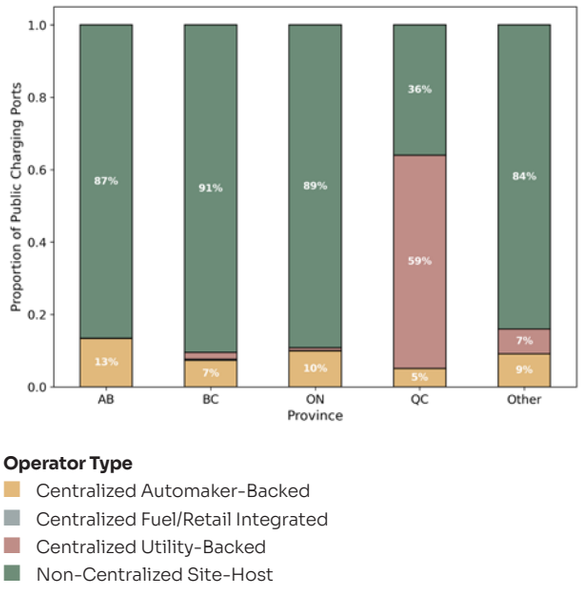



**Figure 3** shows a more varied operator landscape, with centralized networks—automaker-backed, utility-backed, and fuel/retail-integrated—playing a far more prominent role in the deployment of L3 DCFC ports.

- Automaker-backed networks dominate in Alberta (57%), Ontario (55%), and British Columbia (42%), largely driven by the extensive Tesla Supercharger network and other vertically integrated Original Equipment Manufacturer (OEM) solutions.

11 Natural Resources Canada (2025). Electric Charging and Alternative Fuelling Stations Locator. Retrieved from: https://natural-resources.canada.ca/energy-efficiency/transportation-energy-efficiency/electric-charging-alternative-fuelling-stationslocator-map#/find/nearest

- Utility-backed networks are most significant in Québec, where Circuit Électrique operates 57% of L3 ports, and play a secondary role in British Columbia (25%), supported by BC Hydro

- Fuel/Retail-Integrated networks are more visible in the L3 space, with a 13% share in British Columbia and 8% in Alberta, reflecting the expansion of networks by Petro-Canada, Shell Recharge, and similar players along major travel corridors.

- Despite the capital intensity of fast charging, Non-Centralized Site Hosts still maintain a meaningful footprint, especially in the "Other" provinces (45%) and Alberta (34%). These deployments often arise from municipal programs, local energy co-operatives, or destination-based investments in tourism regions.

L3 deployment requires high-power hardware, grid upgrades, and long-term planning, barriers that are more easily navigated by centralized actors like automakers, utilities, or fuel retailers. These networks are often better positioned to provide consistent user experiences, including uniform pricing across sites and integrated payment systems, and their stations are typically located in high-traffic areas to maximize usage. However, important gaps remain in rural regions, where site-level initiatives continue to play a critical role in filling infrastructure voids.

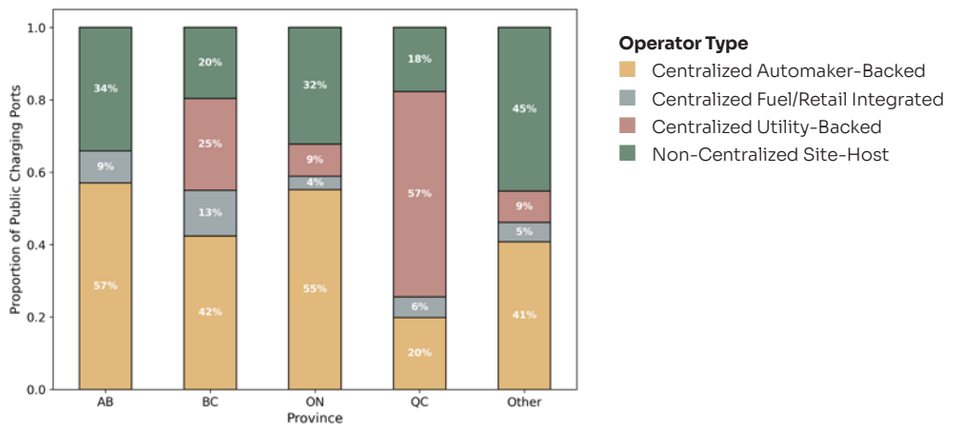
**Regional Takeaways**

- In Québec, the dominance of utility-backed infrastructure in both L2 and L3 deployment, primarily through Circuit Électrique, demonstrates the impact of strong public investment and policy coordination. With a single, vertically integrated LDC (Hydro-Québec) leading the rollout, the province benefits from efficiencies in planning, pricing, and grid integration that are harder to achieve in more fragmented markets.

- In Alberta, Ontario, and other provinces, the pattern is more market-driven: non-centralized deployment prevails for L2, while centralized private actors (automakers and fuel retailers) lead in the L3 segment.

- British Columbia sits between these models, with a relatively balanced presence of utility-backed networks in both charging levels, strong automaker and fuel retailer participation in L3, and continued non-centralized L2 deployment. With only two major, vertically integrated LDCs, utilities could play a significant role in shaping the provincial network, bringing efficiencies in planning, pricing, and grid integration.

**Figure 3: Distribution of Level 3 Public Charging Ports by Operator Type and Province (May 2025)**



# 4 Public Charging Pricing Models and Regulation

## 4.1 Billing Models and Regulatory Constraints

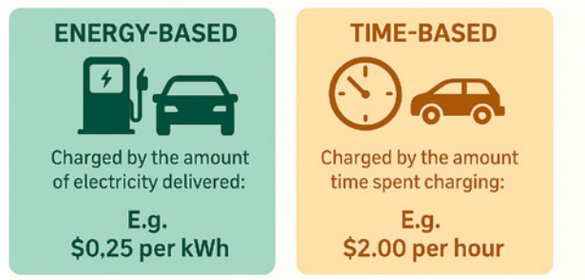
Public EV charging stations typically bill drivers in one of two primary ways (**Figure 4**): by the amount of electricity consumed (per kilowatt-hour, kWh) or by the duration a vehicle is plugged in (per minute or per hour). In addition to energy- or time-based billing, some networks apply idle fees or session-based fees:

- Idle fees discourage drivers from occupying a charger after their vehicle is fully charged. These are commonly applied at Level 3 stations and aim to increase charger availability.
- Session fees are flat-rate charges applied per use, regardless of duration or energy consumed, and are more common in regions with shorter average dwell times (i.e., the length of time an EV is parked and charging).

Energy-based (kWh) pricing is considered fairer for drivers, especially those with EVs that charge more slowly. It mirrors traditional fuel pricing models by charging only for the energy received. However, it can lead to congestion if drivers remain plugged in after their vehicle is fully charged. To address this, many operators pair kWh pricing with idle fees that activate after a grace period once charging is complete.

Time-based pricing charges users for the total time their vehicle is connected, regardless of charging speed. This approach encourages faster turnover at busy stations but can disadvantage drivers with vehicles that charge slowly, as they pay more per unit of electricity.

**Figure 4: Energy based versus time based charging**



Provincial regulations across Canada influence the pricing models adopted. For example, British Columbia[12] and Québec[13] primarily support kWh-based pricing in line with consumer protection practices. In some other provinces, time-based pricing remains common due to regulatory limitations or metering certification requirements.

Federally, ISED has supported the transition to kWh billing by approving certified metering systems. Until recently, most public chargers relied on time-based pricing because of the absence of certified meters. Expanded certification now allows broader implementation of kWh-based pricing across Canada.[14]

**Charging station operators set prices based on a mix of operational costs, local electricity rates, regulatory requirements, and user experience goals.**

### 4.2 Operator Pricing Strategies

Charging station operators set prices based on a mix of operational costs, local electricity rates, regulatory requirements, and user experience goals.[15] Common strategies include:

- **Dynamic pricing** – rates vary by time of day (e.g., higher during peak hours).
- **Tiered pricing by power level** – particularly relevant under time-based billing, to ensure fairness between slow- and fast-charging vehicles.
- **Subscription or membership plans** – used to build customer loyalty through discounted or predictable rates (i.e., Electrify Canada offers a monthly subscription for reduced rates. Tesla provides a Supercharger subscription for non-Tesla drivers.[16])

Larger, centrally managed networks sometimes adopt uniform pricing within provinces or nationally to promote predictability. In contrast, non-centralized site-hosted stations tend to show greater variation, reflecting local installation costs, electricity pricing, or individual business strategies.

At these non-centralized stations, pricing is set by the site host, typically using guidance from the EVSE provider. Providers like FLO and ChargePoint monitor regional pricing patterns and may alert site hosts if their fees significantly diverge from local norms.

As the market matures, pricing models are expected to evolve and become more sophisticated with networks introducing dynamic pricing, incentives for off-peak charging, and greater integration with utility demand management.

12 British Columbia Utilities Comission (2024). British Columbia Hydro and Power Authority. Public Electric Vehicle Charging Service Rates. Retrieved from: https://www.ordersdecisions.bcuc.com/bcuc/decisions/en/item/522170/index.do#_Toc160699163

13 Legis Quebec (2024). Regulation respecting the rates for using the public fast-charging service for electric vehicles. Retrieved from: https://www.legisquebec.gouv.qc.ca/en/document/cr/H-5%2C%20r.%201%20?utm_source=chatgpt.com

14 Electric Autonomy Canada (2023). Measurement Canada approves kWh billing at DC fast charging stations. Retrieved from: https://electricautonomy.ca/charging/2023-02-28/measurement-canada-approves-kwh-billing/

15 Atlas Public Policy (2020). Public EV Business Models for Retails Site Hosts. Retrieved from: https://atlaspolicy.com/wp-content/uploads/2020/04/Public-EV-Charging-Business-Models-for-Retail-Site-Hosts.pdf

16 Electrify Canada (2025). Pricing and Plans for EV Charging. Retrieved from: https://www.electrify-canada.ca/pricing/

**Table 2** below summarizes the pricing characteristics of major Canadian networks, including available power levels, billing methods (per kWh or per time), pricing uniformity, and roaming compatibility.

**Table 2: Network Characteristics and Pricing Models**

| Network | Charging Station Levels | Billing Approach | Uniform Pricing Across Province | Network App and Roaming Partners |
|---|---|---|---|---|
| BC Hydro | L2 – L3 | Energy-based | Yes | BC Hydro EV app; roaming with SWTCH, Shell Recharge, HyperCharge, Circuit Électrique, FLO |
| Circuit Électrique | L2 - L3 | Time-based (L2), Energy-based (L3) | Yes | Electric Circuit app; roaming with BC Hydro, Blink, ChargeLab, ChargePoint, Couche-Tard/Circle K, eCharge, FLO, Hypercharge, IVY, Shell Recharge, SWTCH |
| Ivy Charging Network | L2 - L3 | Time-based (L2), Energy-based (L3) | Yes | Ivy app only; no roaming |
| eCharge (NB Power) | L2 - L3 | Time-based | Yes | eCharge Network app; roaming with FLO and Circuit Électrique |
| Tesla | L2 - L3 | Energy-based except where time-based is required by regulation | No | Tesla app only; no roaming |
| Electrify Canada | L3 | Energy-based | No | Electrify Canada app only; no roaming |
| Shell Recharge | L2 - L3 | Time-based (L2), Energy-based (L3) | No | Shell Recharge app; roaming with ChargePoint, EV Connect, EVgo, FLO |
| Petro-Canada | L2 - L3 | Time-based | Yes | Petro-Canada app only; no roaming |
| Couche Tard/ CircleK | L3 | Energy-based | Yes | Charge app only; no roaming |
| On the Run EV | L3 | Energy-based | No | Journie app only; no roaming |

### 4.3 What it Means for Drivers

For drivers, the diversity of billing models and operator strategies can lead to different charging experiences across Canada. Public charging costs can vary depending on the network, where the station is located, and, in some cases, the type of vehicle.

Affordability remains a recurring concern. Time-based billing, especially at L3 fast chargers, can disadvantage drivers of vehicles limited to lower charging speeds, who may pay more per kilowatt-hour received than owners of higher-powered

models. This challenge is gradually easing as more provinces adopt certified kWh-based billing, allowing drivers to pay for the actual energy received.

Transparency is another area where improvement is needed. Unlike gasoline, charging prices are not always standardized or prominently displayed. Drivers must often navigate multiple network apps with different price displays, idle fee rules, and membership discounts. At the same time, roaming agreements and uniform pricing within some larger networks are beginning to reduce complexity and make costs more predictable.

Geography also shapes the consumer experience. Drivers in high-density areas benefit from greater network availability and more roaming options, while those in rural regions often have fewer choices and can face higher costs. Continued infrastructure build-out and policy attention to equity are gradually closing these gaps.

Taken together, these factors highlight both the challenges and opportunities in making public charging more affordable, transparent, and user-friendly. Progress on billing fairness, price disclosure, and roaming integration will be critical to enhancing consumer confidence and supporting continued EV adoption.


**For drivers, the diversity of billing models and operator strategies can lead to different charging experiences across Canada**

# 5 Economic Considerations for Charging Infrastructure

## 5.1 Capital and Operating Costs of Deployment

Deploying public EV charging infrastructure, particularly L3 DCFC, involves substantial initial and ongoing costs, including[17]:

- **Hardware and Installation:** High-powered stations require expensive equipment, specialized contractors, and often extensive civil works (e.g., trenching, concrete pads).
- **Grid Upgrades:** Many sites require electrical system upgrades, such as transformer replacements or dedicated substations. These upgrades often represent the single-largest financial barrier to deployment.
- **Operational Expenses:** Ongoing costs include electricity, equipment maintenance, software subscriptions, networking fees, and customer support services.

Operators in high-traffic urban areas can often recover these costs through higher station utilization. In contrast, operators in rural or lower-demand areas face more difficulty achieving profitability without external support.

Government incentives, particularly Natural Resources Canada's Zero Emission Vehicle Infrastructure Program (ZEVIP), have been instrumental in improving the financial viability of public charging stations.[18] ZEVIP has been especially successful in supporting the deployment of non-centralized Level 2 chargers by municipalities, businesses, and property managers, expanding access in workplaces and community-based locations, while also helping reduce the upfront costs of projects that require expensive grid upgrades.

17 Grid Strategies (2023). Serving customers best. The benefits of competitive electric vehicle charging stations. Retrieved from: https://gridstrategiesllc.com/wp-content/uploads/2023/05/GS_EV-Paper.pdf

18 Natural Resources Canada (2025). Zero Emission Vehicle Infrastructure Program. Retrieved from: https://natural-resources.canada.ca/energy-efficiency/transportation-energy-efficiency/zero-emission-vehicle-infrastructure-program

Final pricing is set by station operators, giving them flexibility to reflect site-specific capital and operating costs. This pricing autonomy contributes to the regional variation in public charging costs observed across Canada.

### 5.2 Electricity Tariffs and Demand Charge Impacts

Electricity pricing structures play a central role in station economics, especially for high-powered DCFC infrastructure. Key cost components include:

- **Energy Consumption Charges:** These are the per-kWh costs of electricity. In some provinces, utilities apply time-of-use (TOU) rates that vary by time of day, encouraging off-peak charging.
- **Demand Charges:** These fees are based on the highest level of electricity drawn at any point during the billing cycle. Even brief spikes can result in substantial monthly costs. DCFC sites with multiple chargers in use simultaneously are especially vulnerable to high demand charges.

Managing demand charges is critical for most operators, as commercial electricity tariffs in many provinces were not originally designed with EV charging in mind.

- In Ontario, the Ontario Energy Board has introduced the Electric Vehicle Charging Rate (EVC Rate) to support low-load public charging sites in underserved areas.[19]
- In Québec[20] and British Columbia[21], EV-specific commercial rate classes have been introduced that reduce demand charge volatility and better align pricing with EV charging station operations.

These differing rate structures significantly influence long-term economic feasibility and explain some of the regional differences in charging station development and pricing.

*Stakeholder reflections on these topics are discussed in Section 6.*

19 Electric Autonomy Canada (2024). Ontario eyeing discount electricity rates for low-demand public EV charging stations. Retrieved from: https://electricautonomy.ca/charging/2024-05-01/ontario-discount-electricity-rates-ev-charging-stations/

20 Hydro Quebec (2025). Rate BR for charging stations. Retrieved from: https://www.hydroquebec.com/business/customer-space/rates/rate-br-fast-charge-stations.html?utm_source=chatgpt.com

21 British Columbia Utilities Comission (2024). British Columbia Hydro and Power Authority. Public Electric Vehicle Charging Service Rates. Retrieved from: https://www.ordersdecisions.bcuc.com/bcuc/decisions/en/item/522170/index.do#_Toc160699163

# 6 Stakeholder Perspectives on Charging Pricing

Public EV charging pricing in Canada is shaped not only by infrastructure and regulatory frameworks, but also by the experiences, priorities, and evolving strategies of key stakeholder groups. This section draws on interviews and consultations with charging network operators, government agencies, and EV drivers and advocacy organizations. Together, their perspectives provide a nuanced view of the opportunities and challenges involved in setting fair, transparent, and sustainable charging prices.

## 6.1 Views from Charging Network Operators

Charging network operators emphasized that pricing decisions are heavily influenced by the site-specific cost of deploying and operating public charging stations. These costs can vary considerably depending on factors such as land acquisition, permitting requirements, construction complexity, and proximity to existing electrical infrastructure. In particular, differences in local electricity tariffs and how grid upgrade costs are allocated between the utility and site hosts create significant variability across regions. Larger networks often manage these differences by balancing costs across regions, enabling more consistent pricing. In contrast, smaller or decentralized operators typically set prices based on site-specific factors such as installation costs, electricity rates, and expected utilization, which leads to greater variation across their networks. Many operators voiced support for EV-specific electricity rate classes and a clearer national framework to guide how grid-related costs should be allocated. Because station utilization is still evolving alongside EV adoption, operators also highlighted that pricing is reassessed regularly as usage patterns and revenue potential become clearer.

Some private operators also expressed concern over competition with utility-owned charging networks. They highlighted that utilities have access to rate-based funding mechanisms that allow them to recover infrastructure costs across their broader electricity customer base, enabling them to offer lower prices that private firms may be unable to match. This has led to calls for clearer market rules to ensure fair competition and a level playing field between publicly funded and privately operated charging networks.

### 6.2 Views from Government Bodies

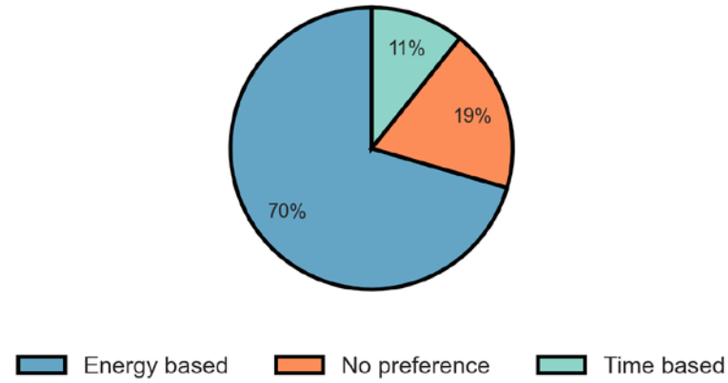
Government institutions across Canada—federal, provincial, and municipal—play a central role in shaping the economics of public charging through infrastructure incentive programs. Many of these initiatives, such as NRCan's ZEVIP, have focused on reducing upfront capital costs, especially in rural or underserved areas where utilization is expected to be lower. These programs have accelerated network expansion and improved geographic coverage. However, most do not regulate the pricing charged to EV users, instead relying on market dynamics and competition to keep prices reasonable.

At the provincial level, some jurisdictions have gone further by addressing the operating cost side of the equation. British Columbia and Québec, in particular, have implemented EV-specific commercial electricity rate classes or pilot tariffs to reduce demand charge volatility, key drivers of L3 DC fast-charging station pricing. These rate reforms aim to provide greater cost predictability for operators, which in turn can support more stable and transparent pricing for users. In provinces where such frameworks are not yet in place, stakeholders note that electricity pricing remains a barrier to predictable or lower-cost public charging.

### 6.3 Views from EV Owners & Advocacy Groups

EV owners strongly prefer energy-based (per kilowatt-hour) pricing, viewing it as a more transparent and equitable approach, particularly for drivers of lower-powered or older vehicles that charge more slowly. According to the 2024 Canadian EV Charging Experience Survey, 70% of respondents favoured kWh billing, while 11% preferred time-based pricing and 19% had no preference (**Figure 5**).[22] This growing preference aligns with recent regulatory changes and expanded use of certified metering equipment that allow for kWh billing in more provinces.

Figure 5: Canadian EV Owners Survey Preferred Billing Method




Consumers have also welcomed improvements in network interoperability, especially the expansion of roaming agreements that let users access multiple charging networks through a single app. These developments simplify the charging experience and enhance price transparency, enabling users to locate and compare stations more easily. Still, some EV drivers, particularly newer adopters, report confusion around inconsistent pricing structures, idle fees, and session charges when traveling across provinces or using different operator platforms.

EV advocacy groups highlighted the need for clearer display standards, real-time price previews in apps, and consistent idle fee policies to support informed decision-making. While pricing consistency is important, many advocates acknowledge that charger availability and location remain top priorities for most users today. That said, residents of multi-unit residential buildings (MURBs) face unique challenges. With limited access to home charging, they depend on public infrastructure and are more vulnerable to price fluctuations. As Canada's network grows, ensuring equitable access through fair, transparent pricing, particularly in urban areas with limited private parking, will be key to supporting inclusive EV adoption.

22 Pollution Probe (2025). 2024 EV Charging Experience Survey. Retrieved from: https://www.pollutionprobe.org/pollution-probe-2024-canadian-electric-vehicle-owner-charging-experience-survey-report/

# 7 Key Recommendations

This report highlights the complexity of delivering fair, transparent, and financially viable pricing across a diverse and rapidly expanding national EV charging infrastructure network. The following recommendations aim to address key challenges and support a more consistent, user-friendly charging experience nationwide:

**1. Ensure pricing consistency, transparency, and accessibility across networks**
Federal and provincial governments, utilities, and charging operators should work together to align public charging pricing practices. This includes encouraging broader use of kWh-based billing, standardizing idle and session fee policies, and ensuring clear communication of all costs through on-site displays and real-time previews in mobile apps. Operators should expand roaming agreements and adopt shared protocols to enable seamless user access and price comparison across networks.

**2. Review electricity tariff structures and grid upgrade cost allocation policies to support sustainable charging infrastructure deployment**
Provincial regulators and utilities should evaluate whether current commercial rate structures, such as demand charges and grid upgrade cost-sharing, create barriers to cost-effective public charging. Introducing EV-specific rate classes or revising cost allocation frameworks can improve predictability and reduce financial risk for operators, particularly in lower-utilization or rural areas.

**3. Address interprovincial regulatory fragmentation to build a cohesive national charging network under comparable pricing structures**
Differences in provincial regulations, utility tariffs, and metering certification standards contribute to fragmented pricing models and deployment hurdles. Federal and provincial governments should work together to harmonize key regulations affecting charger billing, infrastructure approval, and electricity pricing. Streamlining standards will enable greater interoperability, reduce inefficiencies, and support interprovincial EV travel.

**4. Adopt a dual-track strategy for expanding Level 2 and Level 3 charging**
Policymakers should tailor infrastructure support based on the differing characteristics of L2 and L3 charging:

- **Support decentralized L2 deployment** by streamlining funding and permitting for municipalities, businesses, and property managers, especially in provinces where non-centralized site hosts dominate. The ZEVIP has already shown that targeted funding can successfully expand workplace and community-based charging. Continued investment in networked EVSE platforms and roaming agreements can further improve user experience and pricing transparency.

- **Focus L3 funding on centralized actors** such as utilities, automakers, and fuel retailers who are best positioned to manage the capital costs, site complexity, and grid coordination required for fast charging. Public-private partnerships and interconnection prioritization should target L3 buildout along intercity corridors and in underserved regions.

**5. Implement a monitoring framework to link station usage, pricing, and investment priorities**
Federal and provincial governments, working with charging station operators and non-profit organizations, should establish a framework to track how pricing, idle fees, and reliability affect station usage. Real-world data on utilization will guide evidence-based investment, helping ensure future charging infrastructure is directed to locations and models that deliver the greatest value to drivers and the grid.

**Real-world data on utilization will guide evidence-based investment, helping ensure future charging infrastructure is directed to locations and models that deliver the greatest value to drivers and the grid.**

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