

Executive Summary

- The Electric Vehicle Availability Standard (EVAS) requires automakers to make electric vehicles (EVs) available to Canadians. It is a critical market signal that has already encouraged massive investment in over 7,500 public fast charging ports, estimated by the Canadian Charging Infrastructure Council (CCIC) to total ~\$1 billion in charging infrastructure deployment across Canada.
- Despite being impacted by tariffs, Canada's charging industry is on track to meet projected 2030 fast charging requirements of between 22,000 and 23,000 public fast chargers at current rates of growth and investment.
- This represents an estimated \$1.5 billion+ in infrastructure investments for public fast charging alone between now and 2030 based on the current EVAS.
- As Canada considers changes to the EVAS' level of ambition, Canada's charging networks advise that reductions in minimum EVAS sales requirements are likely to lead to large reductions in (1) charging station deployment and (2) associated GDP growth from the transportation electrification sector.
- Reductions in EVAS targets have an outsized impact on the business case for charging because EVAS is an annual sales requirement:
 - Today, Canada's EVAS requires zero-emission vehicles (ZEVs) to represent
 60% of new cars sold by 2030. This target justifies investments to deploy an additional ~12,500 new public fast charging ports by 2030.
 - Modest changes to the targets (e.g. reducing the standard to 40% of new car sales by 2030) will result in an estimated 38% reduction in the number of new public fast charging ports between now and 2030.
 - A more significant reduction (e.g. 30% by 2030) could result in an estimated 62% reduction in the number of new public fast charging ports between now and 2030.
- This change would also have major implications for the GDP contribution from public charging deployment and supporting industries, potentially reducing direct investment by \$500M for fast charging alone.
- CCIC members encourage federal policymakers to maintain ambitious 2030 and 2035 targets for the EVAS to maintain momentum in public charging infrastructure deployment and associated electrical grid upgrades in Canada.

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Detailed Policy Brief

Canada's charging infrastructure: getting stronger, with billions more to invest

Nearly 1,000,000 Canadians¹ have already made the switch to EVs–allowing many to access an estimated \$1,650 per year in annual household cost savings.² Canadian EV drivers are already able to rely on a strong public charging network that is only getting stronger, thanks to major investments by Canada's public charging networks.

Different chargers for different needs

EV drivers rely on a range of charging infrastructure to power their cars – which can broadly be grouped into three categories based on speed:

- **Direct Current Fast Charging / Level 3** charging (typically 50 kW and above, with many chargers now being deployed at 125kW+): A higher-powered charger used for road trips, heavy driving and others with fast charging needs. Can typically add 200-300 km of range in 20-40 minutes.
- **Level 2** charging (typically 5-19 KW): Used for longer parking stays (home, overnight, workplace, parking lots). Can typically add 30-50 km of range per hour of charging.
- Level 1 charging (typically ~1-2 kW): Standard household electrical plug, can typically add 3-5 km of range per hour of charging. This type of charger is rarely used in public settings in Canada.

Public fast charging typically services two customer segments: Drivers who are travelling long distances on road trips and drivers who lack reliable access to charging at their home, whether it be a condo, an apartment, a townhouse or a single-family dwelling.

Numerous surveys³ indicate that Canadians are much more likely to adopt an EV if they feel confident that they will have access to home and public charging. While all types of charging play an important role in the ecosystem, much of the public focus on charging station deployment has been on highly visible public fast charging, which is the main focus of this report.

The number of public fast charging ports has doubled over the last three years. Contrary to the perception that deployment of EV infrastructure is lagging, the number of public fast charging ports has grown 25-30% each year since 2020—and has more than doubled since the start of 2023. This is not to say that the work is complete, just that the policy environment and federal and provincial incentives and education investments, to this point, have created the

¹ Number of EVs currently on the road is taken from Statistics Canada new motor vehicle registrations (EV sales from 2017 to present. Assuming average Canadian vehicle life expectancy of 10 years (CAA reports average life is 11 years) Keep on Driving: Lengthen Your Vehicle's Lifespan.

² Dunsky and Electric Mobility Canada "Power Up - National Report" EV Dashboard - at 12.

³ See e.g. Pollution Probe "2024 Electric Vehicle Owner Charging Survey" <u>2024_EV-report_E_25.pdf</u> at 33.



conditions to invest. Today there are over 7,500 fast-charging ports at over 2,500 locations across the country⁴ deployed on every major highway and in every city in Canada.

Table 1: Growth of public fast-charging ports in Canada

Year	Total public fast- charging ports (end of year)	New ports added during year			
2020	2,068	630 (+44%)			
2021	2,826	758 (+37%)			
2022	3,698	872 (+31%)			
2023	4,932	1,234 (+33%)			
2024	6,364	1,432 (+29%)			
2025 (through Sept)	7,598	1,234 (+19% through Sept)			

Source: Natural Resources Canada, Electric Station and Alternative Fueling Stations Locator; CCIC analysis

Public fast chargers are not just more plentiful; they are also higher-powered and faster than in the past. Public fast charge port operators have been installing faster chargers in recent years, with charging speeds of 150-400 kW, allowing drivers to recharge in 20 minutes or less.⁵ Increasingly, chargers are more reliable, more convenient and are located near amenities so that drivers can rest, relax, use the restroom or grab a meal while they charge. While there are still regional gaps to address, charging an EV on Canadian roads has never been easier.

Even in a high adoption scenario, public fast charging is on pace to meet the targets set by the EV Availability Standard, but the investment needed depends on policy certainty and growing EV sales. Based on the rate of growth that has occurred in prior years, Canada is on track to achieve the 22,000-23,300 public fast charger ports forecast to be required under NRCan and Dunsky's February 2024 analysis of public charging in Canada.⁶ This analysis, shown in Table 2, assumes an average

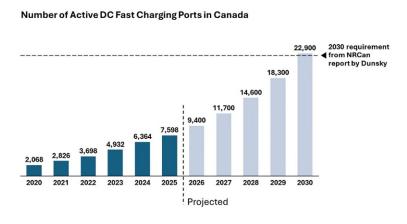


Figure 1: Current and Projected DC Fast Public Charging Ports

⁴ NRCan "EV Charging and Alternative Fueling Stations Locator" accessed October 6, 2025 <u>Electric Charging and Alternative Fuelling Stations Locator - Natural Resources Canada</u>.

⁵ For newer models. As more EVs become available, the number of vehicles capable of accepting higher powered charges increases, underscoring the critical importance of the EVAS.

⁶ Dunsky for NRCan "Electric Vehicle Charging Infrastructure for Canada" (February 2024) <u>Electric Vehicle Charging Infrastructure for Canada - Natural Resources Canada</u>. Note that this report considers a "high home charging" and "low home charging" scenario.



growth rate of ~25% per year (lower than any of the last five years). If policy ambition and federal support remain, Canada is on track to have an estimated ~22-23 thousand public fast charge points by the end of 2030—more than what is needed to serve the new EVs on the road.

Table 2: Projected public fast-charging ports at current rate of growth

Year	Projected public fast ports	New ports required		
2025 (current)	7,500	-		
2026	9,400	1,900		
2027	11,700	2,300		
2028	14,600	2,900		
2029	18,300	3,700		
2030	22,900	4,600		

Source: Canadian Charging Infrastructure Council modelling

large jump in investment needed through to 2035.

The charging industry can keep up this pace. Much of this work is already well under way. The charging industry is already building at a pace of 1,500 - 2,000 public fast charge ports per year, and network operators already have thousands of charge ports under active development, working with site hosts, utilities, and local municipalities across the country to design and plan for deployments in 2026 and 2027. However, these future investments are highly dependent on the broad level of EV adoption prescribed by the EV Availability Standard, or EVAS.

A robust EVAS is critical to attracting private capital, to build and train teams, to scale up Canadian cleantech enterprises, and to set up supply chains that will support the buildout. Without a robust EVAS, charging deployment will slow down and put these investments at risk.

In short, the charging buildout will keep pace with the EV Availability Standard, but the charging industry, and its investors and lenders, need to have the confidence that the vehicles will be there to justify the major investments required to achieve Canada's objectives.

At least 1.5 billion dollars in additional investment is needed for public charging alone. Network operators have already invested hundreds of millions of dollars in public fast charging infrastructure and are expected to spend billions more between now and 2035. This investment supports job creation in construction, electrical trades, and engineering in communities in every province in Canada. To use a high-level estimate, if approximately 12,500 public fast charging ports are built at an estimated cost of \$125,000/port, the investment in public fast charging alone would cost approximately \$1,500,000,000, which does not include some types of systemic utility upgrades, or any investment in public Level 2 charging, and also does not include the

These local investments are supporting high-paying Canadian jobs in construction, electrical trades, and engineering in every province – part of the 130,000 jobs across the EV



sector estimated by a recent report from EY and Electric Mobility Canada.⁷ CCIC member data indicates that approximately 50-65%+ of the costs of a typical public charging installation go towards local skilled trades (primarily electrical and civil) as well as local suppliers and utilities.

Over-adjustment of the EVAS runs the risk of triggering a major slowdown in deployment of all charging infrastructure. While CCIC members understand that some minor adjustments to the EVAS may be necessary, they caution that adjusting too far will have real and negative consequences on the millions of Canadian families seeking to save money by adopting EVs and will require substantial additional charging infrastructure to support their adoption. The fast charging use case provides a helpful illustration of the impact of easing the EV Availability Standard on charging investments generally.

Reducing EVs sold reduces the justification for investing in charging stations. Given the high cost of installing public fast charging (well over \$500,000 per site in most modern deployments), network operators closely analyze projected traffic numbers before they build a site. They are accountable to capital providers, such as investors and lenders, to achieve a sufficient economic return. This analysis takes place by forecasting demand for charging over 8-12 years at a minimum, with demand based on expected EVs on the road (directly tied to EVAS minimum sales targets). Without a major change in the supply of affordable and attractive EVs on the market, an easing of the EV Availability Standard will reduce the expected growth in EVs on the road, which in turn will reduce the demand for charging, and, therefore, the number of public fast chargers that the market will support.

The CCIC has modelled the potential impact of changes to the EV Availability Standard on charging infrastructure deployment. Because the changes are still under consideration by the federal government, we have modeled three scenarios: Scenario 1, the base case of 60% EV sales by 2030; Scenario 2, in which the EVAS is lowered to 40% of total vehicle sales by 2030; and Scenario 3, where it is lowered to 30%. In our analysis, we have used a ratio of public fast charging stations to total BEVs on the road that is consistent with the ratios proposed by Dunsky for Natural Resources Canada.⁸

Hybrids and Plug-in Hybrids (PHEVs) reduce public fast charging investment case. Hybrid vehicles are powered by fossil fuels and do not charge electrically. They are incapable of running off of zero or low emission electricity. While PHEVs can charge by electricity, they are assumed not to use public fast charging. From the perspective of the investment case in public fast charging, both vehicle types are equivalent to gas powered vehicles in that the greater the proportion of either, the lower the business case for investment in public fast charging. The

⁷ EY for EMC "Electrifying Progress" https://emc-mec.ca/wp-content/uploads/2025/04/PUBLIC-0FFICIAL-April-10-2025-EMCs-Economic-Report_EN.pdf.

⁸ The target EVs per DCFC ratio for 2030 (170 BEVs per DCFC port) is taken from the Electric Vehicle Infrastructure in Canada study prepared by Dunsky Energy for Natural Resources Canada. Straight-line interpolation used for years 2026-2029. Electric Vehicle Charging Infrastructure for Canada - Natural Resources Canada.



model assumes that the split of electric vehicles sold until 2030 is 75% battery electric and 25% PHEV.

Table 3: Changes in ports required and proposed to be added to the public charging network by 2030 under the three scenarios.

Scenario description	New ports forecast vs. current 2030	Ports vs. scenario 1 (base case)	
Starting Point: approximately 7,500 public fast charging ports deployed as of report publication.	-	-	
Scenario 1: Base case following the existing EVAS targets (20% of new car sales by 2026, 60% by 2030, and 100% by 2035).	12,431 (vs current)	-	
Scenario 2: Reduce the 2030 target to 40% of new car sales	+7,759	-38%	
Scenario 3: Reduce the 2030 target to 30% of new car sales	+4,733	-62%	

Table 4: Scenario 1: existing EVAS targets

Total build required = ~12,431 new ports by 2030 vs. publication date

Year	ZEV %	EVs sold	BEVs sold ⁹	Total BEVs	BEV / DCFC port ¹⁰	DCFC req'd	New DCFC req'd	Annual added DCFC
2025				720,000	96	7,500	-	
2026	20%	380,000	285,000	1,005,000	113	8,894	1,394	1,394
2027	26%	501,600	376,200	1,381,200	130	10,625	3,125	1,731
2028	35%	662,112	496,584	1,877,784	147	12,774	5,274	2,149
2029	46%	873,988	655,491	2,533,275	164	15,447	7,947	2,673
2030	60%	1,140,000	855,000	3,388,275	170	19,931	12,431	4,484

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 $^{^{\}rm 9}$ Annual vehicle sales assumed at 1.9 million, in line with 2024 per Statistics Canada.

¹⁰ Note: these ratios are included to align with the Dunsky analysis provided for NRCan. It is the same for each subsequent table and has not been re-included to save space. An Excel version of the model is available upon request.



Table 5: Scenario 2: 40% of new car sales by 2030

Total build required = \sim 7,759 new ports by 2030 (-38% from Scenario 1)

Year	ZEV %	EVs sold	BEVs sold	Total BEVs	% vs base	BEV / DCFC port	DCFC req'd	New DCFC req'd	% vs. scen. 1
2025				720,000		96	7,500	-	
2026	15%	285,000	213,750	933,750	-7%	113	8,263	763	
2027	19%	367,650	275,738	1,209,488	-12%	130	9,304	1,804	
2028	25%	474,269	355,701	1,565,189	-17%	147	10,648	3,148	
2029	32%	611,806	458,855	2,024,044	-20%	164	12,342	4,842	
2030	40%	760,000	570,000	2,594,044	-23%	170	15,259	7,759	-38%

Table 6: Scenario 3: 30% of new car sales by 2030

Total build required = 4,733 new ports by 2030 (-62% from Scenario 1)

Year	ZEV %	EVs sold	BEVs sold	Total BEVs	% vs base	BEV / DCFC port	DCFC req'd	New DCFC req'd	% vs. scen. 1
2025				720,000		96	7,500	-	
2026	10%	190,000	142,500	862,500	-14%	113	7,633	133	
2027	13%	254,600	190,950	1,053,450	-24%	130	8,103	603	
2028	18%	341,164	255,873	1,309,323	-30%	147	8,907	1,407	
2029	24%	457,160	342,870	1,652,193	-35%	164	10,074	2,574	
2030	30%	570,000	427,500	2,079,693	-39%	170	12,233	4,733	-62%

Source: Canadian Charging Infrastructure Council modelling

Conclusions: Even a slight reduction (from 60% to 40% by 2030) in the EVAS would translate into a serious (38%) reduction in new public fast charging infrastructure deployment between now and 2030. A larger reduction (to 30% by 2030) would be expected to translate into a 62% reduction over the same time period. In the near term, the charging industry, which is already deploying an estimated 1,500 - 2,000 public fast charge ports per year, would need to reduce its deployment rate to 1,000 ports per year or less. The economic cost of losing this investment would be material.



Impact of EVAS Reductions on DC Fast Chargers Needed in Canada

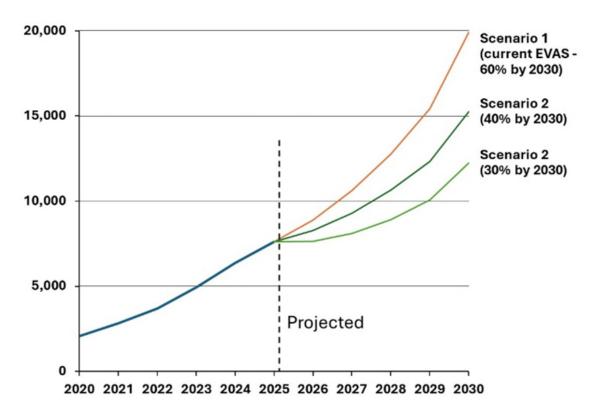


Figure 2: Public Fast Charging Deployment Scenarios Based on EVAS Adjustments

These reductions would be highly disruptive to the rapidly-growing charging industry – resulting in cancelled projects, job losses, pullback in investment, and stranded capital across the country. Using the estimated per port cost of \$125,000 above, Scenario 3 works out to an approximate estimated reduction in direct investment of over \$500 million in fast charging stations alone, and does not factor in foregone cost savings to Canadian families from adopting EVs or grid upgrades and related macroeconomic adders.

These impacts would be felt most heavily in areas of lower EV adoption, including many smaller communities and northern / rural areas, making it more difficult for their residents to access the cost savings of driving electric.

For questions regarding this document, please reach out to

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Canadian Charging Infrastructure Council (CCIC)

The CCIC seeks to achieve a comprehensive and economically sustainable electric vehicle (EV) charging ecosystem across Canada. CCIC members represent over 50% of public charging sites in Canada.

CCIC members believe that this mission can be supported by providing governments and stakeholders with trustworthy, economically and technically sound advice and advocacy leveraging the expertise and experience of its members.

CCIC is open to members that are involved in the EV charging industry including station owners, network and station operators from the public and private sectors, charging technology providers and suppliers, charging installers and maintainers and related infrastructure service providers and entities providing financing for charging station deployment and operation, including via credit transactions and project financing.