

# Not so EV:

Supply challenges deterring many would be B.C. buyers from going electric, but change is coming.



# Not so EV: Supply challenges deterring many would be B.C. buyers from going electric, but change is coming.

While 2021 was a record year in B.C. for electric vehicle (EV) adoption,<sup>1</sup> it could have been even higher if more EV models had been available. Manufacturers faced supply chain issues as well as lithium battery and microchip shortages over the past couple of years, resulting in a lack of EVs for would-be buyers. Although manufacturing is still facing challenges, new research suggests change is on the horizon, with microchip shortages and supply chain issues easing by 2023. British Columbians will still have to plan carefully to get behind the wheel of an EV in the next few months though, and some are going to great lengths to do so—from waitlists to battles with other buyers.

## Highlights

- A new survey<sup>2</sup> conducted on behalf of BC Hydro finds over one third (34 per cent) of British Columbians who are interested in buying a vehicle are hesitant to buy an EV because of lack of availability.
- Over the past couple of years, most car companies delayed EV model launches because of the COVID-19 pandemic and disrupted supply chains, which affected the availability of EVs in B.C.<sup>3</sup>
- New research from an independent automotive analyst shows EV supply chain issues will begin to ease by 2023, with supply close to fully meeting demand by 2026.<sup>4</sup>
- The current wait time at some car dealerships for an EV in B.C. right now can be up to a year, depending on the model.<sup>5</sup>
- And while 35 per cent are considering purchasing an EV as their next vehicle, many are not willing to put up with the wait.
- In fact, 41 per cent of those actively shopping for an EV describe the buying process as difficult.
- Some looking to buy an EV have resorted to joining a waitlist (16 per cent) or joining multiple wait lists (seven per cent), and five per cent have put a deposit on more than one EV.
- Others took more extreme measures to get behind the wheel:
  - 13 per cent made inquiries to buy a friend/family/neighbours' car.
  - 15 per cent considered purchasing an EV out of province or country.
  - 11 per cent settled for a colour they did not want or lack of features they did want.
  - Five per cent bought a more luxurious model or spent more than they initially wanted to.
  - One per cent fought with another EV buyer.
- The good news is the EV market is on the cusp of significant growth – already EV market share in B.C. is expected to grow 3.5 per cent from about 25,000 new units in 2021 to over 30,000 in 2022.
- In 2023, market share will grow by an estimated 6.5 per cent with 45,000 new units available.
- And by 2026 EVs in B.C. could make up a quarter of all EVs in Canada, with an additional 118,000 units.
- Growth will be driven by improvements in microchip and battery production and the introduction of new models, particularly pickup truck EV variants and SUVs.
- In fact, sales numbers for the first quarter of 2022 show the pool of electric vehicles in North America is already improving as almost twice as many electric cars were purchased in the first quarter of 2022 than in the first quarter of 2021.<sup>6</sup>

1 Zero Emission Vehicle report 2021 British Columbia

2 Online survey conducted by Majid Khoury of 800 British Columbians who own a vehicle or are interested in buying one, conducted between April 22–25, 2022, margin of error 3.46%.

3 Electric Vehicle Market report

4 EV sales Forecast – Canada and B.C. – James Carter, independent automotive analyst research, 2022 – Vision Mobility.

5 EV sales Forecast – Canada and B.C. – James Carter, independent automotive analyst research, 2022 – Vision Mobility.

6 Kelley Blue Book

- The global market share of EVs is expected to reach as much as 20 per cent by 2025,<sup>7</sup> and change is well underway:
  - Volkswagen expects microchip shortages to ease by mid-2022, leading to a surge in vehicle outputs, with EV production rising as much as ten per cent.
  - Ford has doubled its planned electric vehicle production capacity to 600,000 vehicles per year by 2023, with microchip shortages expected to ease.
  - Tesla has added new factories in the US and expanded manufacturing in China with 2023 production expected to grow by 1.2 million units.<sup>8</sup>

## Solutions

While it has faced challenges over the past few years, the EV market in B.C. is growing, with more models on the horizon for 2023. Some automakers have committed to a complete switchover to EV manufacturing in the years to come, with many introducing new models in many categories from SUVs to trucks and compact cars. BC Hydro is taking steps to meet the increase in demand for EVs including working to have 325 fast chargers at 145 sites throughout B.C. by December 2025. British Columbians hoping to get behind the wheel of an EV as soon as possible should:

- **Plan and be flexible:** EVs are in high demand, so a very specific vehicle might take time to locate. That is why it is crucial to do some planning, short list some models and get on multiple waitlists, and BC Hydro can help. British Columbians can search all the electric vehicles available in B.C. on our website – by manufacturer, type of car, price, and range. Visit [bchydro.com/ev](https://bchydro.com/ev).
- **Buy used:** Used EVs are cheaper and available from the same main channels as any other car—private sellers, used car dealers and certified used. The Province also recently announced that it will no longer collect provincial sales tax (PST) on used EV sales.
- **Know that change is coming:** Automakers are busy pivoting to get more models manufactured. EV supply chain issues will begin to ease by 2023, with supply close to meeting demand by 2026. The Province’s **Zero-Emission Vehicles Act** is a major driver increasing EV supply to B.C. In fact, B.C. receives more EVs per capita than other provinces, contributing to the highest sales rates in North America.

## EV adoption at record high in B.C.

B.C. leads the way with adoption of electric vehicles in Canada, with zero emissions vehicles accounting for 13 per cent of all new light vehicles for 2021 in the province. In fact, B.C. represents 28 per cent of all ZEV registrations in Canada—a growth of 57 per cent last year.<sup>9</sup>

Although these are impressive numbers, they could have been even higher if more EV models had been available. Manufacturers faced supply chain issues as well as lithium battery and microchip shortages over the past couple of years, resulting in a lack of EVs for would-be buyers.

A new survey conducted on behalf of BC Hydro finds over one third (34 per cent) of British Columbians who are interested in buying a vehicle are hesitant to buy an EV because of lack of availability. This report will look at what British Columbians are doing right now to get behind the wheel of an EV and will show that although manufacturing is still facing challenges, new research suggests change is on the horizon, with microchip shortages and supply chain issues easing by 2023.

## Demand and supply challenges

Over the past couple of years, supply chain disruptions, material shortages, and high costs put pressure on the entire vehicle market, including EVs. Analysts estimated that global automakers lost \$210 billion in 2021, but global EV sales remained strong, up 40 per cent.<sup>10</sup>

<sup>7</sup> UBS Investment Bank

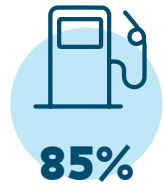
<sup>8</sup> Clean Technica

<sup>9</sup> IHS Market Report

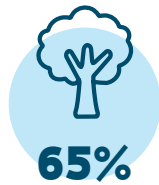
<sup>10</sup> Electric Vehicle Market report

As global sales numbers suggest, demand for EVs is also growing in B.C. and British Columbians are taking notice. In fact, the vast majority (88 per cent) of those surveyed said they have noticed an increase in demand for EVs over the past two years, and of those most (85 per cent) attribute the rise in popularity to increasing oil and gas prices. Other reasons cited for the surge in popularity of EVs include increasing concern for the environment (64 per cent), the fact that EVs are available in more makes and models now (51 per cent), and a perception that EVs are now trendy to own (46 per cent).

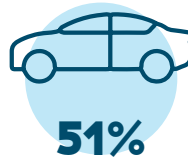
## WHY BRITISH COLUMBIANS THINK EV DEMAND IS RISING



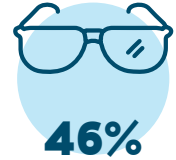
**Rising oil and gas prices**



**Increasing concern for the environment**



**More makes and models of EVs now available**



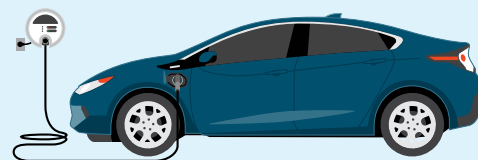
**Trendy to own**

Although many cite oil and gas prices as a reason for high EV demand, shortages have been around for a while. In 2021 for example, more than half of Canadian dealerships did not have any electric vehicles in stock, and wait times exceeded six months at over 30 per cent of dealerships that did not have any EVs in stock.<sup>11</sup> Here in B.C., wait times for electric vehicles can range anywhere from one month to over a year. When asked what they would consider a reasonable wait time for an EV, 13 per cent of those surveyed on behalf of BC Hydro said no wait time at all is reasonable, while the majority (24 per cent) said one to two months is the reasonable maximum wait time to get behind the wheel.

## Would be B.C. buyers

Over a third of those surveyed (35 per cent) said they are considering purchasing an EV as their next vehicle, and this number goes up to 38 per cent in the Lower Mainland. However, about 20 per cent are looking to buy a vehicle in the next year or so, which could still pose some challenges, especially considering some are not willing to wait any length of time on a waitlist. In fact, of those actively searching for an EV, 41 per cent describe the buying process as difficult.

**7% of would-be EV buyers joined multiple waitlists to get behind the wheel and 5% put multiple deposits down on different EVs.**



Some looking to buy an EV have resorted to joining a waitlist (16 per cent) or joining multiple wait lists (seven per cent) – five per cent have even put down a deposit on more than one EV, just to cover their bases in case one sale falls through. Others took more extreme measures to get behind the wheel, such as making inquiries to buy a friend/family/neighbours' car (13 per cent) or considering purchasing an EV out of province or country (15 per cent). Some (11 per cent) also settled for a colour they did not want or lack of features they did want. Five per cent bought a more luxurious model or spent more than they initially wanted to, and one per cent even went so far as to fight with another EV buyer.

<sup>11</sup> Electric Vehicle Market report

## ADDITIONAL MEASURES BRITISH COLUMBIANS HAVE TAKEN TO BUY AN EV



**28% considered purchasing used**



**15% considered purchasing out of province or country**



**13% made inquiries to buy a friend, family, or neighbours' car**



**11% willing to buy any colour or model available**



**5% bought something more luxurious /spent more than wanted to**



**1% fought with another EV buyer**



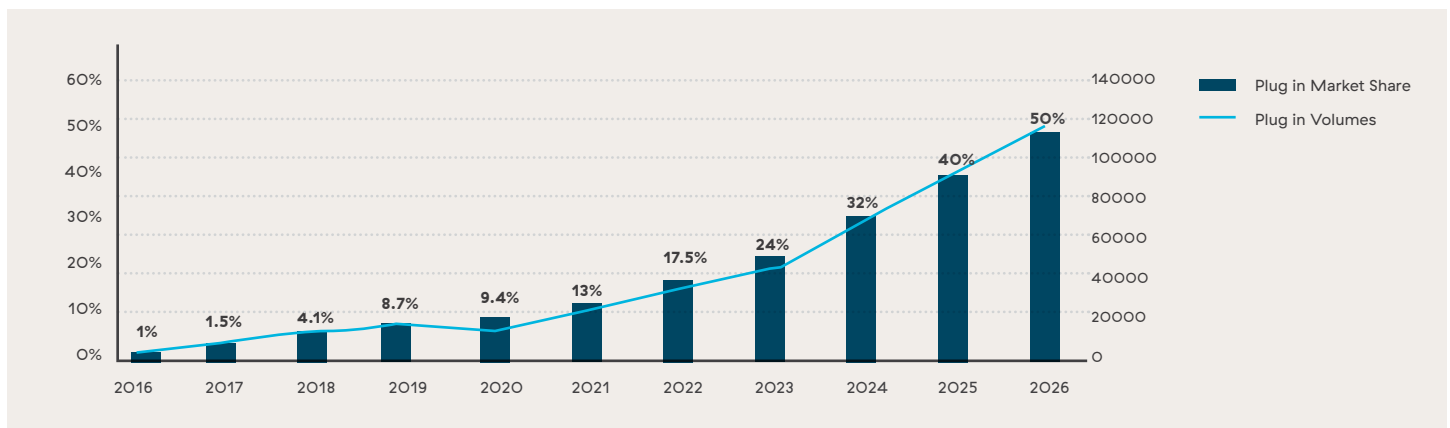
**1% cheated or lied**

## Market forecast

The EV market is on the cusp of significant growth—by 2023 EV market share in B.C. will grow about 6.5 per cent and over 45,000 units will be available compared to about 30,000 in 2022. Things get even better a few years down the road—by 2026 EVs could make up half the market share in B.C. and 25 per cent of the market in Canada, with 118,000 units available. This growth will be driven by improvements in microchip and battery production as well as the introduction of new models, particularly pickup truck EV variants of the top three selling models in Canada: The Ford F-150, Dodge RAM and Chevrolet Silverado / GMC Sierra.

In fact, sales numbers for the first quarter of 2022 show the pool of electric vehicles in North America is already improving as almost twice as many electric cars were purchased in the first quarter of 2022 than in the first quarter of 2021.<sup>12</sup> The global market share of EVs is expected to reach as much as 20 per cent by 2025,<sup>13</sup> and change is well underway. For example, Volkswagen expects microchip shortages to ease by mid-2022, leading to a surge in vehicle outputs, with EV production rising as much as ten per cent. Ford has doubled its planned electric vehicle production capacity to 600,000 vehicles per year by 2023, with microchip shortages expected to ease. Tesla has added new factories in the US and expanded manufacturing in China with 2023 production expected to grow by 1.2 million units.<sup>14</sup>

## BRITISH COLUMBIA NEW CAR PLUG IN SALES AND SHARE



<sup>12</sup> Kelley Blue Book

<sup>13</sup> UBS Investment Bank

<sup>14</sup> Clean Technica

## Tips for buyers

BC Hydro is taking steps to meet the increase in demand for EVs including working to have 325 fast chargers at 145 sites throughout B.C. by December 2025. British Columbians hoping to get behind the wheel of an EV as soon as possible should keep in mind current market constraints and plan and be flexible with what they want in an EV. Because EVs are in such high demand, a very specific vehicle might take time to locate. That is why it is crucial to do some planning, short list some models and get on multiple waitlists, and BC Hydro can help. British Columbians can search all the electric vehicles available in B.C. on our website – by manufacturer, type of car, price, and range. Visit [bchydro.com/ev](https://bchydro.com/ev).

Another option is to buy used. Used EVs are cheaper and available from the same main channels as any other car—private sellers, used car dealers and certified used. The Province also recently announced that it will no longer collect provincial sales tax (PST) on used EV sales.

Also know that change is coming, and that the EV market has come a long way. In 2012 there were just a handful of models available on the market, and now there are dozens. Automakers are also busy pivoting to get more models manufactured, pouring money into EV production, with about 82 models predicted to be available by 2023, and 109 models predicted by 2025. In fact, manufacturing issues will start to ease by 2023, and by 2026 EVs could make up half the market share in B.C., and a quarter of market share in Canada, with 118,000 units available. The Province's **Zero-Emission Vehicles Act** is a major driver increasing EV supply to B.C. In fact, B.C. receives more EVs per capita than other provinces, contributing to the highest sales rates in North America.

