

Choose a

PLUG-IN VEHICLE

that meets  your needs

2020 EDITION



**running
electric**

A campaign by:

équiterre

With the support of:

Québec 



**ROULEZ
VERT**



Take advantage of the financial assistance offered by Transition énergétique Québec

- › New or used electric vehicles
- › Charging stations at home, in a multi-unit residential building, or in the workplace

vehiculeselectriques.gouv.qc.ca

MESSAGE FROM THE GOUVERNEMENT DU QUÉBEC



Jonatan Julien
Minister of Energy
and Natural Resources



Québec is firmly committed to its energy transition as part of the fight against climate change. Our efforts are producing results because we have the lowest GHG emission levels per capita in Canada. Regardless of that fact, we still need to double our efforts in the transportation sector, where most of the greenhouse gases are emitted and a steady rise in the number and size of vehicles on our roads is being observed.

The foundations have already been laid for the energy transition in the transportation sector, which will enable us to not only curb our dependence on fossil fuels, but also lower our GHG emissions. Specific examples include the Roulez vert program and the additional financial assistance provided for purchasing and installing charging stations at multi-unit buildings. The latter example is one of the levers recently implemented by our government to speed up transportation electrification and help bring more electric vehicles into Québec's marketplace. On that note, the ZEV standard should also be mentioned, as it is essential to ensuring an adequate supply of electric vehicles within our territory.

To reach our targets, however, it is paramount that Quebecers espouse the energy transition concept and manifest this in their choice of vehicles, such as by giving priority to vehicles that meet their real needs, but have a lower carbon footprint. With this in mind, the Roulons électrique campaign was launched last year to let everyone know that solutions and measures have been set up to help them make these choices and spur them into action.

This campaign, which is coordinated by Équiterre, is the product of concerted efforts by several committed energy transition actors, especially in the transportation and sustainable mobility sector. It has definitely helped the movement grow.

More and more consumers want to buy an electric vehicle and the number of electric vehicles on our roads continues to rise. Nearly 70,000 electric vehicles were traveling Québec's road network at the end of 2019, which leads us to believe that we will reach the target before the end of 2020.



AN ELECTRIC VEHICLE IS...

ECONOMIC



You could save up to \$7,500 over five years!

Yes, this takes into account the higher initial cost of the vehicle.

See pages 12 to 16 for more information.

EASY



Driving is easy and charging is done at home!

Charging an electric vehicle is as easy as charging your cellphone.

See pages 20 to 23 for more information.

PRACTICAL



The current supply of plug-in vehicles includes 46 models from 23 brands!

Find the one that suits you best.

See pages 26 to 48 for more information.

CLEAN



In Québec, electric vehicles emit 80% less CO₂!

Even when taking into account its complete life cycle.

See pages 24 and 25 for more information.

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MESSAGES FROM OUR PARTNERS

The Running Electric campaign, coordinated by Équiterre with financial support of Transition énergétique Québec, benefits from the collaboration of multiple partners.

CAA-Québec

CAA-Québec believes in diversity of transportation solutions to ensure better mobility, to reduce travel-related pollution, and to meet users' needs. That's why it seems crucial to us to continue making electric and plug-in hybrid vehicles better known by consumers.

CCAM

The Corporation des concessionnaires d'automobiles de Montréal, through its Montreal International Auto Show, presents and showcases technological advancements in mobility, providing consumers with every opportunity to make a conscientious decision regarding their transportation needs.

CCAQ

At the Corporation des concessionnaires d'automobiles du Québec (CCAQ), we believe that acquiring a fully electric vehicle (EV) or plug-in hybrid vehicle (PHEV) is a choice for a new society: greener and more environmentally friendly.

Hydro-Québec

By producing clean and renewable electricity, Hydro-Québec is actively involved in transport electrification and the decarbonisation of Québec. By developing innovative technologies for batteries and electric vehicle motors, and by deploying the *Electric Circuit* EV charging network, we are also paving the way for electric transport.

RNCREQ

In the energy context in Québec, the use of electric cars is an important element in the challenge of passenger transportation.

UMQ

Municipalities are key players in the development of sustainable mobility and transport. They play a pivotal role in achieving the common goals of reducing greenhouse gas emissions. Transport electrification is indeed a global priority, but above all it is a local one!



MESSAGE FROM ÉQUITERRE

AVÉQ

The Association des véhicules électriques du Québec (AVÉQ), a community of over 10,000 members, has been the reference in electric mobility in the province since 2013. It provides neutral and objective information on the use of an electric vehicle and represents the interests of current and future EV drivers to authorities of the sector.

IVI

In addition to working on technological development in transport electrification for nearly 20 years, the Innovative Vehicle Institute (IVI) offers businesses and the general public information on electric vehicles, as well as the opportunity to experience them. Enjoy the discovery!



Colleen Thorpe
Directrice générale
Équiterre



Faced with the climate emergency, science is unequivocal. We must steer decisively towards solutions that lead us to a low-carbon economy.

Transport electrification is a daunting challenge, but it is also one of the pivotal solutions. Furthermore, Québec is stepping up as one of the major players on the international scene with cutting-edge expertise as well as renewable energy.

Adopting an electric vehicle is a choice made by more and more citizens. The Running Electric campaign, coordinated by Équiterre, is part of the combined efforts from all partners to accelerate the transition in this direction. It is essential that this shift be made concurrently with car fleet reduction and an attractive offer of zero emission public transportation.

We are all part of the solution!



Fully Electric or Plug-In Hybrid?

Depending on your transportation habits, your reality and your preferences, you can opt for a fully electric model or a plug-in hybrid model.

Fully Electric Vehicle (EV)



A frequent choice for:

- ✓ Two-vehicle households;
- ✓ Two-vehicle households that already have a plug-in vehicle;
- ✓ Motorists who travel over 85 km a day and occasionally travel longer journeys (more than 300 km).

Characteristics:

- ✓ Consumes no fossil fuel;
- ✓ Runs on electricity at all times
- ✓ Range varying from 150 to 595 km depending on the model;
- ✓ Compatible with fast charging (50 kW and above), with some exceptions.

Main Advantages:

- ✓ Highly reduced maintenance costs;
- ✓ Highly reduced energy costs;
- ✓ Access to fast charging;
- ✓ Runs quietly and vibration-free;
- ✓ Never uses gasoline;
- ✓ Zero greenhouse gas emissions (GHG) during use.

Plug-In Hybrid Electric Vehicle (PHEV)



A frequent choice for:

- ✓ Single-vehicle households;
- ✓ First purchase of a plug-in vehicle;
- ✓ Motorists who travel less than 85 km a day, but who often travel longer journeys.

Characteristics:

- ✓ Both electric motor and combustion engine;
- ✓ Rechargeable electric range of 21 to 76 km depending on the model;
- ✓ Total range comparable to combustion vehicles thanks to classic fuel tank;
- ✓ Types of charging: 120V and 240V, with some exceptions.

Main Advantages:

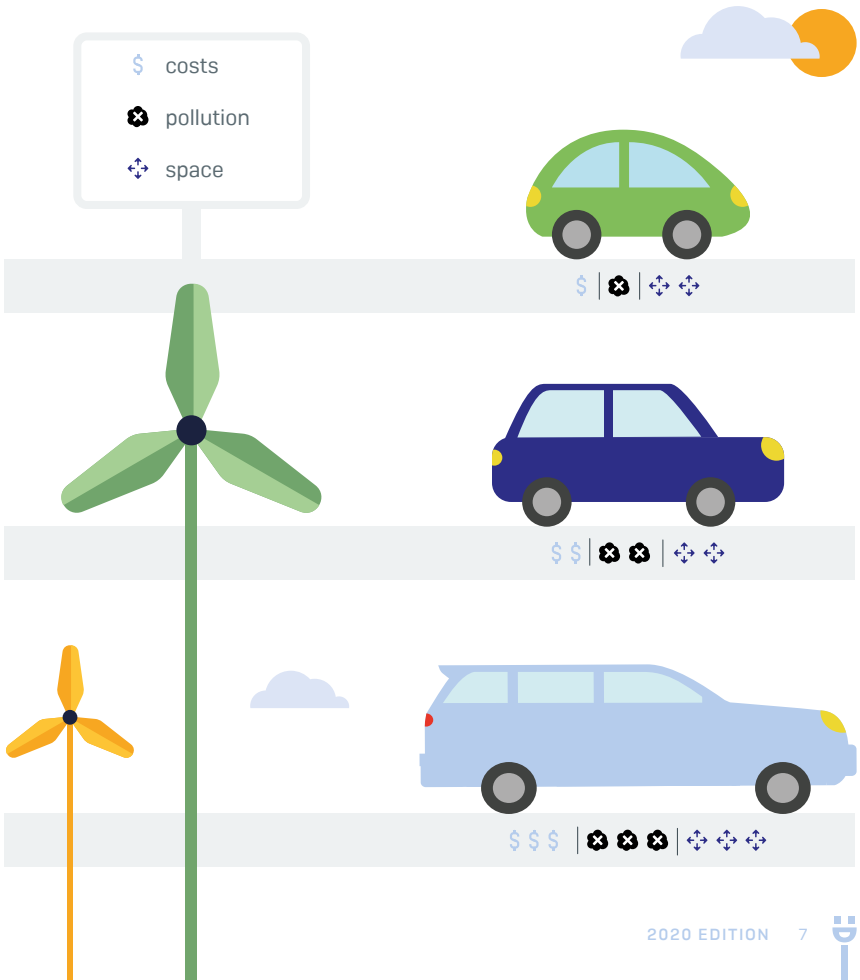
- ✓ Reduced maintenance costs;
- ✓ Reduced energy costs;
- ✓ Electric/gasoline compromise for more frequent long journeys;
- ✓ Fully electric short trips;
- ✓ Reduced GHG emissions.

SUV or Car

Choosing a size according to your actual needs

The growing popularity of SUVs is such that, according to the International Energy Agency (IEA), they were the second largest source of increase in carbon dioxide (CO₂) emissions in the world between 2010 and 2018. Québec is no exception to this trend, and urban 4x4s are now omnipresent on our roads. Whether it runs on electricity or gasoline, an SUV costs more to acquire and use and has a greater environmental footprint than a car.

It is therefore important to rationalize the "need" for an SUV by evaluating its actual use and considering the space offered by available models. The number of seats needed rarely justifies the choice of an SUV, which generally does not offer more passenger places than a car – except for the much larger ones. As for cargo volume, the mechanical configuration of electric vehicles frees up a lot of interior space, which is why many cars offer both a roomier interior and greater loading capacity than some SUV-rated models.



Winter with an Electric Vehicle

Gasoline vehicles (also called thermal vehicles) are sometimes difficult to start in cold weather; this is a well-known problem. So what about plug-in vehicles?

Cold Start

First of all, you must know that—like any electrical device—you do not start an electric vehicle; you turn it on! And it works very well, even in severely cold weather. In addition, it is possible to preheat and defrost without polluting. Many Québec municipalities limit idling to three minutes for thermal vehicles but this is of no concern to electric vehicles.

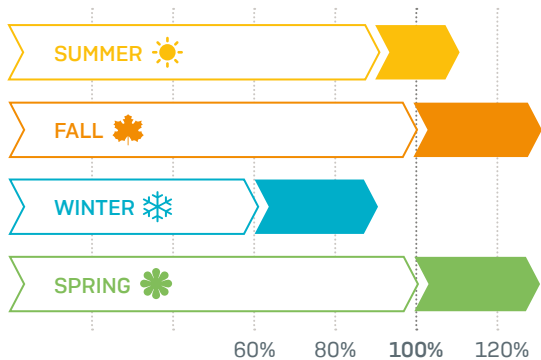


Seasonal Range

Cold weather affects all vehicles' energy efficiency. Whether it is gasoline-fuelled or electric, a car consumes more in winter. This is partially due to the higher density of cold air, which has a greater resistance. With plug-in vehicles, heating the passenger compartment also draws on reserves.

Electric range may vary from 10% to 40% depending on weather conditions. It is essential to consider this fact when choosing a vehicle. Each model's indicated range is actually an annual average: during spring, summer and fall, the car will often yield a higher mileage, while in winter it will be lower.

**Seasonal Variations of Electric Range
(100% = range as announced by the manufacturer)**



Real Time Information

Like the fuel gauge in a gasoline car, the electric vehicle informs the driver about its remaining range in real time. In addition, the vehicle will display warnings once the energy level dips below a certain threshold (typically around 20%).

Large or Small Battery?

Like the choice between a fully electric vehicle or plug-in hybrid vehicle, the ideal battery size depends on your transport habits and your reality.

Full Battery Every Day

The battery is full every day, thanks to home charging.
Thus, daily commutes determine the required range and therefore, the ideal battery size.

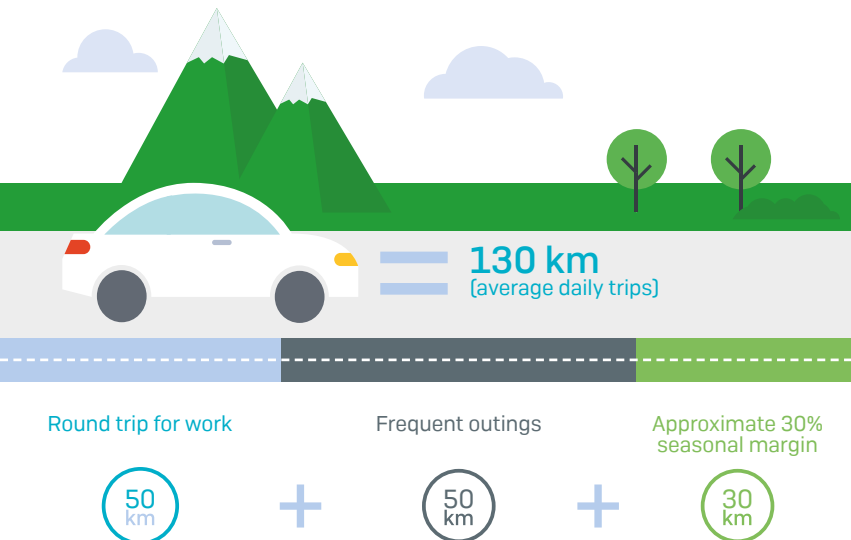


More Affordable

Save money by choosing a model whose range corresponds to your daily needs.
If you go for a vehicle with a battery too large for your needs, you will be paying for kilometres of range that will never be used.

Evaluate Your Daily Travels

In this typical example, the driver can choose from several models with a range of 150 to 200 kilometres, thus saving several thousand dollars on the vehicle's acquisition cost compared to models offering a greater range.



However, a person who daily travels many more kilometres should consider a model with greater range. Higher savings on usage-related costs will quickly compensate for the higher cost of acquisition.

Green Plate Benefits

The numbers and letters on a plug-in vehicle's license plate are of a green hue, which entails several benefits.



Access to Reserved Lanes

Electric vehicles with a green license plate can drive in multiple reserved lanes, regardless of the number of passengers. To find out if you can use a reserved lane, look for the electric vehicle pictogram on signs along the following roads and highways:

- LAVAL: A-15 Northbound, A-25 Southbound
- LÉVIS: R116 Eastbound, R132 Eastbound
- LONGUEUIL: R112 Westbound
- MONTREAL: A-15 Northbound, A-20 Eastbound
- QUEBEC: A-740 Northbound, A-740 Southbound, A-440 Westbound
- SAINT-LAMBERT: R112 Westbound
- TERREBONNE: A-25 Northbound



Toll Exemptions

Plug-in vehicles benefit from free access to the toll bridges on autoroutes 25 and 30 as well as to paying ferry services of the Société des traversiers du Québec:

- For toll bridges, visit www.a25.com and www.a30express.com;
- For ferries, visit www.traversiers.com (fee exemption on ferries applies to the vehicle only).



Free Parking

In the cities of Joliette, Saint-Jérôme and Victoriaville, parking may be free for plug-in vehicles. Contact the concerned municipalities for details.



Important note: Spaces next to public charging stations are reserved **for charging vehicles**. You may park there while charging, but the car must be moved once the charging session is over.

Financial Incentives

Financial incentives for individuals are offered by Québec and Canada governments as well as several municipalities in Québec. Measures are also available for multi-residential buildings, employers, and businesses.

For more information, consult the various authorities' documents:

Québec, through Transition énergétique Québec
<https://vehiculeselectriques.gouv.qc.ca/english/>

Canada
www.tc.gc.ca/en/services/road/innovative-technologies/zero-emission-vehicles.html

Municipalities
Your municipality's website



Incentives for Plug-In Vehicles

Québec*

- ✓ New vehicle: up to \$8,000
- ✓ Used vehicle: up to \$4,000

Canada*

- ✓ New vehicle: up to \$5,000\$
- ✓ Tax deduction (business):
100 % from the 1st year

Business*

- ✓ Cascades: up to 2,000 \$



Incentives for Charging Stations

Québec*

- ✓ Residential charging station:
up to \$600
- ✓ Multi-housing charging station:
up to \$5,000 per connector

Municipalities*

- ✓ Sherbrooke and Dorval: up to \$500
- ✓ Mirabel: up to \$350\$
- ✓ Joliette, Granby, Marieville, Farnham
and Saint-Zotique: up to \$250
- ✓ Prévost: up to \$200
- ✓ L'Épiphanie and East Angus:
up to \$100

* Conditions apply. Programs in effect at the time of printing of this brochure (December 15th, 2019).



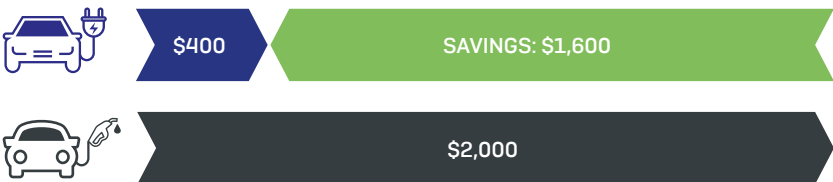
Savings on Energy Costs

Among savings on usage-related costs, those on energy costs are the most significant. Energy costs for an electric vehicle are generally cut by more than 75%.

Driving 100 Kilometres: Gasoline Vehicle Versus Electric Vehicle



Energy Costs and Savings over 20,000 Kilometres



By comparing to a gas vehicle that consumes 8 L/100 km, we can see that after 20,000 kilometres, an EV driver will have saved \$1,600.

Additional Information – Energy Costs

Compare the costs of driving 20,000 kilometres depending on vehicle fuel consumption and energy prices [gasoline or electricity].

A. Gasoline

Cost of driving 20,000 km, depending on vehicle fuel consumption and price of gas.

Consumption (L/100 km)	Vehicle [2019]	GAS COSTS FOR DRIVING 20,000 KM		
		\$1.20/L	\$1.25/L	\$1.35/L
4.4	Toyota Prius	\$1,056	\$1,100	\$1,188
4.9	Toyota Camry Hybrid	\$1,176	\$1,225	\$1,323
7.1	Honda Civic Sedan	\$1,704	\$1,775	\$1,917
7.4	Hyundai Elantra	\$1,776	\$1,850	\$1,998
7.5	Toyota Corolla	\$1,800	\$1,875	\$2,025
8.2	Nissan Rogue	\$1,968	\$2,050	\$2,214
8.3	Toyota RAV4 AWD	\$1,992	\$2,075	\$2,241
8.8	Mazda CX-5	\$2,112	\$2,200	\$2,376
9.5	Volkswagen Tiguan	\$2,280	\$2,375	\$2,565
10.1	Hyundai Tucson AWD	\$2,424	\$2,525	\$2,727

B. Electricity

Cost of driving 20,000 km, depending on vehicle consumption and electricity cost.

Consumption kWh/100 km	Vehicle [2019]	ELECTRICITY COSTS FOR DRIVING 20,000 KM ¹			
		Home	Public Charging Stations		EXAMPLE ²
			240 V Station	50 kW DCFC	85%/5%/10%
15.5	Hyundai Ioniq EV	\$310	\$465	\$930	\$426
15.8	Tesla Model 3 SR+	\$316	\$474	\$948	\$435
17.4	Hyundai Kona EV	\$348	\$522	\$1,044	\$479
17.6	Chevrolet Bolt EV	\$352	\$528	\$1,056	\$484
18.6	Kia Niro EV	\$372	\$558	\$1,116	\$512
18.7	Nissan LEAF	\$374	\$561	\$1,122	\$514
19.3	Kia Soul EV	\$386	\$579	\$1,158	\$531
20.3	Tesla Model S 75D	\$406	\$609	\$1,218	\$558
22.5	Tesla Model X 75D	\$450	\$675	\$1,350	\$619
27.5	Jaguar I-Pace	\$550	\$825	\$1,650	\$756

¹ Electricity cost: residential rate [home] = \$0.10/kWh; public charging station 240 V (\$1/h) = average of \$0.15/kWh; 50 kW fast charging station (\$11.50/h) = average of \$0.30/kWh.

² Typical example where charging is done 85% of the time at home, 5% on a 240 V public charging station, and 10% on a 50 kW fast charging station.



Savings on Maintenance Costs

In addition to saving money on energy, EV drivers also save money on vehicle maintenance, particularly on oil and brakes.

Oil Changes

With a fully electric vehicle, there are no more oil changes. With a plug-in hybrid vehicle, oil changes are generally less frequent.

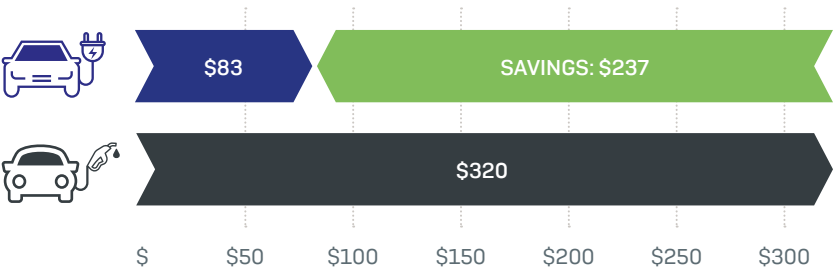


Brake Wear

One notable feature of electric vehicles is regenerative braking, an energy recovery mechanism used to slow down or stop which does not employ discs and pads, thus extending the brakes' life.



Maintenance Costs (oil and brakes) Distributed over 20,000 km



See table at the bottom of page 16 for data used to compare maintenance costs [oil changes and brake replacement] of plug-in vehicles to those of gasoline vehicles.

Other Parts

In thermal vehicle maintenance, several parts and liquids are periodically replaced: belts, filters, spark plugs, muffler, coolants and others. These are all absent in an electric vehicle.

Comparing Total Costs

Reduced energy and maintenance costs mean that even if monthly payments are higher, the total cost of ownership of a plug-in vehicle can end up being 10% to 20% lower!

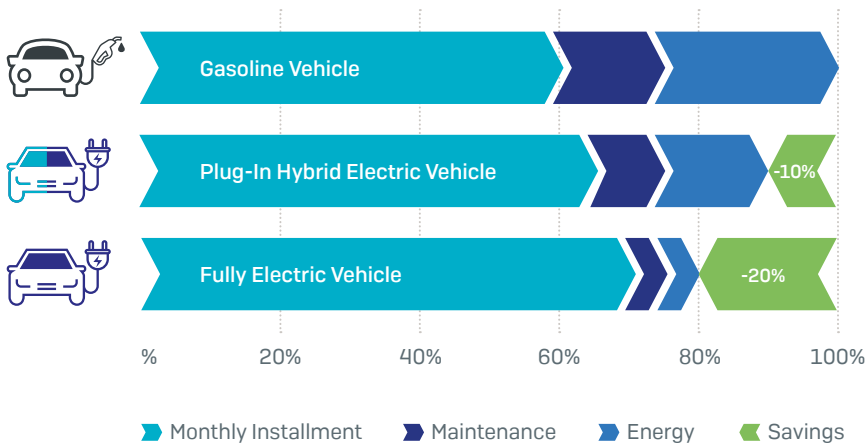
Monthly Payments

Financial incentives from the governments of Québec and Canada [see page 11] partially or totally eliminate the additional cost of acquisition. Monthly payments for the purchase or lease of a plug-in vehicle will be very similar to those you would pay for a comparable gasoline vehicle.

Use-Related Expenses

Since the launch of the first plug-in vehicle models nearly 10 years ago, millions of drivers around the world have made significant savings by choosing EV driving. A plug-in vehicle can cut energy costs by more than 75% and periodic maintenance (oil and brakes) by at least 50%.

Breakdown of Monthly Expenses



Total Cost of Ownership

Comparing the total costs of ownership (TCO) shows that an electric vehicle often costs much less than a comparable gasoline model.

$$\begin{array}{l} \text{TCO} = \\ \text{Acquisition} \\ \text{[purchase price minus subsidy(s) minus residual value]} \\ + \\ \text{Use} \\ \text{[energy plus maintenance]} \end{array}$$



Savings per 20,000 km: Comparison Indicator

Our «Savings per 20,000 km» indicator helps compare a plug-in vehicle with similar gasoline vehicles or other electric vehicles of the same category.

Up to \$2,000 in Savings per 20,000 km

See the «Savings per 20,000 km» indicator for each vehicle in the presentation sheets (pages 26 to 42) and in the summary table (pages 43 to 48).



How Was the Indicator Calculated?

For each vehicle, a comparison indicator was calculated by taking into account energy costs and two maintenance operations (oil and brakes). For this calculation, the following data was used:

A. Savings on Energy Costs

Consumption of a plug-in vehicle is calculated based on its efficiency rating (source: Natural Resources Canada), then savings on gasoline are derived by comparing it with gasoline costs according to the average fuel consumption ratings of the 10 most efficient models of the category.

AVERAGE CONSUMPTION PER CATEGORY (TOP 10 MOST EFFICIENT MODELS)			
CATEGORY	L/100 KM	CATEGORY	L/100 KM
Subcompact	8.03	Station wagon: Small	7.55
Compact	6.65	Small SUV	7.86
Mid-size	5.59	SUV	10.14
Full-size	7.98	Minivan	11.06

For plug-in hybrids, energy costs are distributed between gasoline and electricity while taking into account the vehicle's electrical range: the greater the range, the greater the electric share.

B. Savings on Maintenance Costs

Savings on maintenance are calculated by comparing the maintenance costs of a gasoline vehicle with those of an electric vehicle. The cost of such operations can obviously vary from one model to another and from one brand to another. For ease of comparison, data are standardized as follows:

COST AND FREQUENCY ACCORDING TO TYPE OF VEHICLE			
Operation	Gasoline	Plug-In Hybrid	Fully Electric
Oil	\$60 / 10,000 km	\$60 / 20,000 km	\$0
Brakes	\$500 / 50,000 km	\$500 / 80,000 km	\$500 / 120,000 km



Used Vehicle Market

The first modern plug-in models entered the market in 2011-2012. We can now find vehicles that are up to 7 or 8 years old on the used market.

Demonstrated Reliability

According to a study conducted by Consumer Reports in 2017, electric vehicles are apparently MORE RELIABLE than those equipped with a combustion engine. This is mainly due to their simpler design and the absence of any fuel or cooling systems or wear parts such as belts, filters and spark plugs.



Fast-Growing Demand

More and more second-hand plug-in vehicles are available at dealerships and other companies involved in the sale of used vehicles. Some businesses even specialize in electric vehicles. Second-hand plug-in vehicles often find takers faster. Among the 10 fastest-selling used models in 2018 are the Chevrolet Volt, the BMW i3 and the Tesla Model S [source: AutoGuide.com].

An Accessible Option

A used plug-in vehicle is a more accessible choice since the first owner has already absorbed the initial depreciation. First-generation models (2011 to 2015), which generally have a smaller range compared to more recent models, can be excellent options as a household's second vehicle, or for a complementary vehicle to public transportation. Here are some examples of vehicles going for under \$15,000 (Fall 2019):

- ✓ Chevrolet Spark EV 2014 (EV) at \$12,500;
- ✓ Chevrolet Volt 2013 (PHEV) at \$12,700;
- ✓ Ford C-Max 2013 (PHEV) at \$10,990;
- ✓ Ford Focus Electric 2015 (EV) at \$12,990;
- ✓ Nissan LEAF 2014 (EV) at \$12,390.

Find out more about the subsidy program for used vehicles. See page 11.



Warranty and Reliability

With an emerging technology such as electric motorization, it is natural to take a closer look at the manufacturer warranty and to review the product's reliability.

Reassuring Warranty

Electrical and hybrid components –battery included– of plug-in models are covered by a generous warranty ranging from 8 to 10 years, or 100,000 to 200,000 kilometres (even unlimited mileage in some cases).

Other components – which in fact are the same as in gasoline vehicles – benefit from the usual manufacturers warranty.



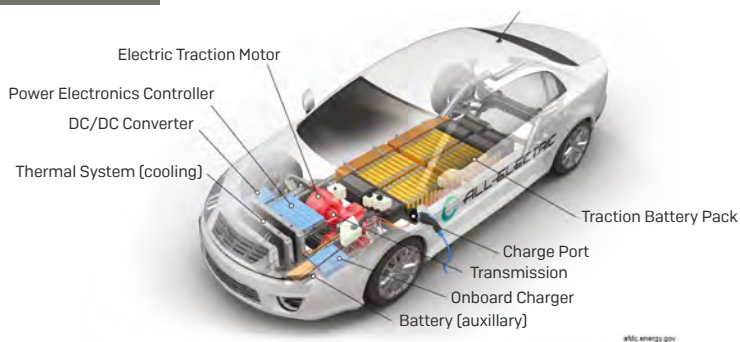
Comparable or Superior Reliability

Components common to both electric and thermal vehicles, such as brakes, suspension and steering, of course have a comparable level of reliability.



Some parts, such as the fuel system or muffler, are either absent altogether (EV) or less stressed (PHEV). Here are some examples of the most frequently replaced parts in gasoline vehicles [source: Forbes, 2015]: oxygen sensor, catalytic converter, coil and spark plugs, air mass flow sensor. In the case of plug-in vehicles, the most frequent repairs are the replacement of suspension parts and electronic modules.

All-Electric Vehicle



Lifespan of the Battery

The battery's life goes far beyond its use in an electric vehicle. At the end of its full lifespan, its content will be recycled, recovered and reused in a circular economy.

First Life: Traction Battery

The useful life of an electric vehicle's traction battery is at least 8 to 12 years, depending on operating conditions. Some degradation may occur during this period but the vehicle's performance is not affected. The battery design includes control systems that optimize battery life and ensure that the range remains adequate beyond the 160,000 km covered by the manufacturers' warranty.

Tips to Optimize Battery Life



- ✓ Avoid or minimize the use of fast charging in high temperatures
- ✓ Avoid regular use of fast charging
- ✓ Avoid charging above 80%
- ✓ Avoid frequently discharging below 20%

Second Life: Stationary Battery

Once its useful life as a traction battery is over, this part is reused as a stationary battery to store energy in case of need: power failure or peak hours management. Several companies, including car manufacturers themselves, are using "old" electric vehicle batteries this way. This second life can last from 10 to over 20 years, depending on the context.

End of Life: Recycling Materials

Companies like Lithion in Montreal and Li-Cycle in Ontario can recycle electric vehicle batteries depleted after decades of service. Recycling recovers 80% to 95% of a battery's minerals and metals – including lithium, nickel, manganese and cobalt – which are then of the same quality as at the time of their initial mining.

The Multiple Lives of the Battery: Circular Economy





Filling Up at Home

One of the characteristics of plug-in vehicles is that you can “fill up” at home. Therefore, the battery is 100% full every day.

It Takes Just a Few Seconds

Upon arriving home, it takes just a few seconds to plug the vehicle to the charging station. The next morning, the vehicle's battery is 100% full again.

Two Home Charging Options

Standard Outlet (120 V)

A plug-in vehicle's equipment always includes a 120 V charging station that plugs into a standard household outlet.

The 120 V charging station will provide a full charge daily if the electric vehicle travels less than 100 km per day. For more intense use, 240 V charging will be considered to ensure a full charge at least once a day.

240 V Installation, Like a Stove or Dryer

For faster charging, some EV drivers opt for a 240 V charging station. This type of equipment charges the battery three to five times faster than 120 V charging (see charging time table on page 23).

The installation of a 240 V station by a master electrician is a simple operation, comparable to the installation of a stove or dryer outlet.

Purchase and Installation

The cost of a 240 V charging station varies between \$700 to \$1,300, depending on model and options. The cost of installation depends on the context, but averages around \$500. When purchasing a 240 V charging station, EV drivers can count on several models manufactured in Québec or from other North American brands. Financial incentives are available: see page 11.

Schedule Charging and Avoiding Peak Hours

Using the vehicle's dashboard or mobile application, it is possible to schedule specific charging hours. This makes it possible, among other things, to optimize battery conditioning according to a planned departure time. This function also helps avoid peak hours during Winter months as per Hydro-Québec's recommendations.



Charging on the Road

When charging on the road, an EV driver synchronizes breaks and charging needs. A stop at a touristic destination, a meal break or a quick snack all become opportunities to plug in.

Finding Public Charging Stations

Charging stations are located in a wide variety of locations such as Metro grocery stores, Rona home hardware stores, Caisses Desjardins, SÉPAQ establishments and rest areas. Online tools help find charging stations from different charging networks. The most commonly used in Québec are [chargehub.com](https://www.chargehub.com) and [plugshare.com](https://www.plugshare.com). They include charging stations of all public networks, the main ones being: The Electric Circuit, Flo, EVduty, Tesla and ChargePoint.



Good Public Charging Practices

Spaces next to charging stations are reserved for charging electric vehicles*. Once a charging session is completed, the vehicle must be moved to free up the charging station. It is not necessary to remain near the vehicle while charging. An EV driver simply takes note of the time by which the charging session is estimated to be completed—indicated by the car or in the charging station's mobile application—and thus makes sure to return before then.



*** IT'S THE LAW:** *since May 18th, 2018, article 388.1 of the Highway Safety Code stipulates that «Only electric road vehicles and plug-in hybrid road vehicles may stop in a space reserved for recharging electric vehicles [...] when they are plugged into a charging station».*



At DC fast charging stations (DCFC), it is recommended to stop charging once the battery level is around 80%, since charging speed decreases when approaching this point. If more energy is needed, it might be more efficient to continue charging on a 240 V station.

Planning Ahead

During long trips, EV drivers will plan steps while taking into account the vehicle's range and the density of the charging network along the itinerary. Some roads are better covered and offer several options; in other areas, choices may be limited. As when going through a region without gas stations, one has to fill-up according to available services.



Charging Speed

How long does it take to charge an electric vehicle? Actually, we only rarely have to think about that, since charging is almost always done at home.

Factors That Influence Charging Speed









Charging speed is the number of kilometres added to a vehicle's range per hour of charging.

Factors that influence charging speed are:

- Charging station's power level;
- Battery's state of charge;
- Battery's temperature;
- On-board charger's power (vehicle equipment).

In the image below, driver activity indicates whether the driver usually remains on standby while charging or if he/she plugs his/her car at the station and leaves for other activities while charging. Perception of time shows how the duration is perceived by the driver: 20 seconds to plug the vehicle and start charging, or 30 minutes of waiting.

Charge Contexts

LOCATION OR ACTIVITY	CHARGE DURATION AND SPEED	TYPE OF CHARGING STATION	DRIVER ACTIVITY	PERCEPTION OF TIME
Home	 8 to 12 h HOME  Up to 6 or 40 km per hour	120 V or 240 V	Parked	20 seconds
Work, bus, train	 4 to 8 h WORKPLACE  Up to 40 km per hour	240 V	Parked	20 seconds
Shopping, visits, meals	 1 to 2 h PUBLIC PLACES  Up to 40 or 200 km per hour	240 V or 50 kWh (DCFC)	Parked	20 seconds
Highways and main roads/travelling	 30 min TRAVEL  Up to 200 or 400 km per hour	50 kW (DCFC) Supercharger	Waiting	30 minutes

Just Like a Cellphone

Once plugged in, just like a cellphone, the electric car charges itself; no monitoring needed.







Additional Information – Charging Time

Charging time is influenced by the power of the on-board charger – a component of the vehicle – and by the power of the charging station used. The lowest power of the two devices will determine maximum charging power. These limitations apply to 120 V and 240 V charging only. These limitations apply to 120 V and 240 V charging only.

In the case of fast or ultra-fast charging, the vehicle's on-board charger is not involved, and charging speed will be limited either by the charging station's power output or by the maximum power accepted by the battery controller.

Taking into account size of the battery, power of the vehicle charger and type of charging station, here are examples of amounts of time needed to charge the battery up to 100% or, in the case of fast charging, 80%.

Vehicle and Its Battery	Type of EV	On-board Charger (kW)	CHARGING TIME ¹			
			12 A / 120 V	30 A / 240 V	50 kW (BRCC)	120 kW (SC) ²
			10% to 100%	10% to 100%	10% to 80% ³	10% to 80% ³
Toyota Prius Prime (8.8 kWh)	PHEV	3.3	6 h 00	2 h 30		
Mitsubishi Outlander PHEV (12 kWh)	PHEV	3.3	8 h 15	3 h 15	0 h 15	
Honda Clarity PHEV (17 kWh)	PHEV	6.6	11 h 30	2 h 30		
Hyundai IONIQ EV (28 kWh)	EV	6.6	19 h 00	4 h 00		
Volkswagen e-Golf (35.8 kWh)	EV	7.2	24 h 30	4 h 30	0 h 45	
Nissan LEAF (40 kWh)	EV	6.6	27 h 15	5 h 30	0 h 45	
Chevrolet Bolt EV (60 kWh)	EV	7.2	41 h 00	7 h 30	1 h 15	
Tesla Model 3 (62 kWh)	EV	10.0	42 h 15	7 h 45	1 h 15	0 h 40
Kia Niro EV (64 kWh)	EV	7.2	43 h 30	8 h 00	1 h 15	
Hyundai Kona EV (64 kWh)	EV	6.6	43 h 30	8 h 45	1 h 15	
Speed			Slow	Normal	Fast	Ultra fast
						
Added Range per Hour of Charging			5 to 6 km	30 to 40 km	150 to 200 km	300 to 400 km
Context of Use			Home	Home/ Work/ Outings	Excursion Long Distance	Long Distance

¹ For the charging time estimate, average power is 35 kW for DCFCs and 65 kW for Superchargers.

² SC = superchargers (exclusive to Tesla vehicles).

³ DCFC and SC: it is recommended to end a fast charging session at 80%, since charging power is increasingly limited when nearing this point.

Life Cycle: Reduced Environmental Impacts

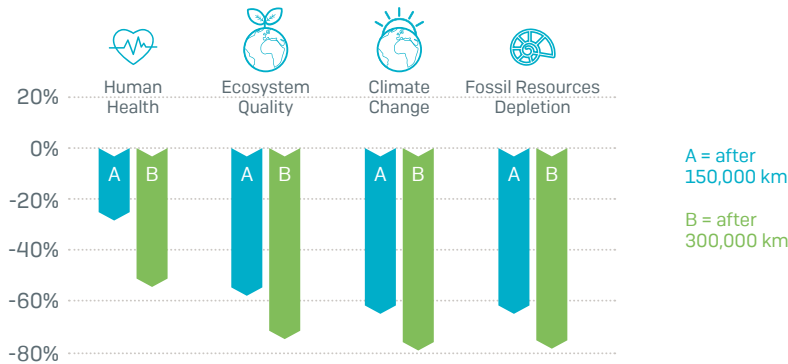
Though higher at the manufacturing stage, a life cycle analysis indicates that environmental impacts related to an electric vehicle are lower than those of a thermal vehicle.

Impacts 29% to 80% Lower Than For Conventional Vehicles

The environmental performance of electric vehicles compared to gasoline vehicles is positive in these four areas: human health, quality of ecosystems, climate change and depletion of fossil resources [source: CIRAIG, 2016¹].

These data take into account production of vehicle parts, including the battery, transportation to end user, vehicle usage and end of life.

Environmental Impacts of an Electric Vehicle Compared to a Gasoline Vehicle



In terms of mineral resources depletion, electric vehicles however have a higher impact than gasoline vehicles (+ 25%).

Québec's Clean Electricity

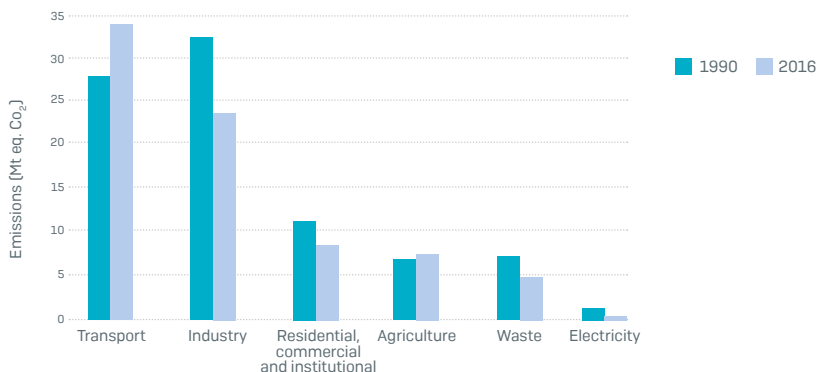
The energy produced in Québec is one of the cleanest in the world, with 98% coming from renewable energy sources [source: Hydro-Québec].



¹ International Reference Centre for the Life Cycle of Products, Processes and Services (CIRAIG). (2016). Technical Report – Comparative life-cycle assessment: potential environmental impacts of electric vehicles and conventional vehicles in the Québec context. Online [in French only]: <http://www.hydroquebec.com/data/developpement-durable/pdf/analyse-comparaisonvehicule-electrique-vehicule-conventionnel.pdf>.

GHG Emissions, Transportation Sector

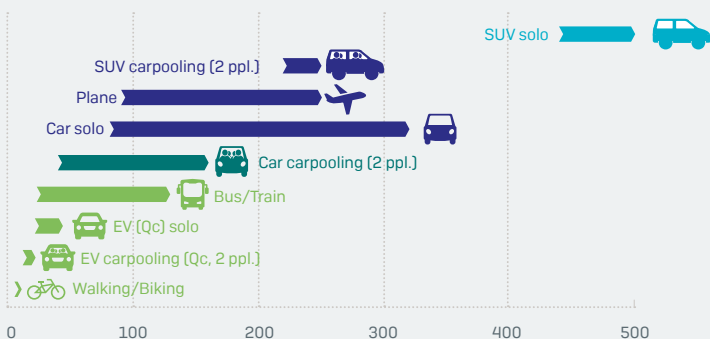
According to the 2016 *Inventaire québécois des émissions de gaz à effet de serre*, emissions from the transportation sector increased by nearly 22 % during the period covered by the report (1990-2016). All other sectors, with the exception of agriculture, recorded a decrease in emissions. Transportation remains the main source of GHG emissions in Québec, accounting for 43 % of total emissions.



Québec GHG emissions by sector of activity, 1990 and 2016

To Minimize the Environmental Impacts of your Travel

1. When possible, use public or active transportation, carpool, or opt for car sharing.
2. Keep your current vehicle longer, especially if you don't do much mileage and if your vehicle is energy efficient.
3. If you are switching to an electric vehicle, choose a model whose range and size are adapted to your actual needs. Favour buying a used vehicle.
4. If you change to a newer gasoline model, choose a smaller size that matches your actual needs and—most importantly—consumes the least gasoline possible



GHG emissions (g CO₂ per person/km) of different transportation choices



PLUG-IN VEHICLES IN QUÉBEC

The following pages contain summary sheets for each plug-in model available or coming in 2020 in Québec.

running electric

The website runningelectric.ca features a dynamic calculator that can help you identify electric vehicles best suited to your lifestyle and calculate savings you could achieve by driving electric.

→ Visit runningelectric.ca

Content of Each Summary Sheet

	IDENTIFICATION¹	Vehicle make and model
	Category	Vehicle category, determined by Natural Resources Canada
	Type	Fully electric or plug-in hybrid
	Battery²	Battery capacity, expressed in kilowatt hours (kWh)
	Range	Number of kilometres of range, in electric mode
	Number of seats	Number of seats in the vehicle, including driver
	Base price³	Sales price, basic version without options and total potential financial incentives, indicated in parentheses after the base price ⁴
	Savings per 20,000 km⁵	Savings from vehicle use, per 20,000 km, compared to a gasoline vehicle of the same category

¹ Vehicle photo: Photo does not necessarily correspond to the base model, especially regarding colour. In addition, it sometimes represents the 2019 model year.

² Data presented (battery, range, number of seats and base price) correspond to the information available at the time of printing. In case of error or discrepancy, the car manufacturer's official documentation (websites and brochures) obviously takes precedence over the information in this document.

³ Base price: This price does not include taxes (GST, QST), transportation costs, air conditioning and tire taxes or additional dealer charges.

⁴ Total potential financial incentives: amount indicated, without prejudice, is based on information available as of December 15th, 2019. To be validated with the relevant authorities. See page 11.

⁵ Savings per 20,000 km: See page 16 for calculation parameters for this indicator.

AUDI



E-TRON 55 QUATTRO

	SUV
	Fully electric
	95 kWh
	329 km
	5
	\$90,000 [-\$3,000]
	\$2,206 / 20,000 km



AUDI



E-TRON SPORTBACK

	Unavailable
	Fully electric
	95 kWh
	Unavailable
	5
	Unavailable
	Unavailable



BMW



530e XDRIVE

	Compact
	Plug-in hybrid
	9.2 kWh
	24 km
	5
	\$68,200
	\$448 / 20,000 km



BMW



745Le XDRIVE

	Full-size
	Plug-in hybrid
	Unavailable
	Unavailable
	4
	\$122,300
	Unavailable



BMW



i3

	Subcompact
	Fully electric
	42.2 kWh
	246 km
	4
	\$44,950 [-\$13,000]
	\$1,874 / 20,000 km



BMW



i8 COUPÉ

	Subcompact
	Plug-in hybrid
	11.6 kWh
	29 km
	4
	\$150,650
	\$791 / 20,000 km



CHEVROLET



BOLT EV

	Station wagon: Small
	Fully electric
	66 kWh
	417 km
	5
	\$44,800 [-\$13,000]
	\$1,768 / 20,000 km



CHRYSLER



PACIFICA HYBRID

	Minivan
	Plug-in hybrid
	16 kWh
	51 km
	7
	\$54 188 [-\$13,000]
	\$1 899 / 20,000 km



FORD



ESCAPE TITANIUM HYBRID

	Small SUV
	Plug-in hybrid
	Unavailable
	Unavailable
	5
	Unavailable
	Unavailable



FORD



FUSION PLUG-IN HYBRID

	Mid-size
	Plug-in hybrid
	9 kWh
	42 km
	5
	\$36,930 [-\$6,500]
	\$740 / 20,000 km



FORD



MUSTANG MACH-E

	Subcompact
	Fully electric
	75.7 / 98.8 kWh
	355 / 475 km (estimate)
	5
	\$50,495
	Unavailable



HONDA



CLARITY PLUG-IN HYBRID

	Mid-size
	Plug-in hybrid
	17 kWh
	76 km
	5
	\$40 990 [-\$13,000]
	\$989 / 20,000 km



HYUNDAI



IONIQ ELECTRIC

	Mid-size
	Fully electric
	38.3 kWh
	300 km (estimate)
	5
	Unavailable [-\$13,000]
	Unavailable



2019 model shown

HYUNDAI



IONIQ ELECTRIC PLUS

	Mid-size
	Plug-in hybrid
	8.9 kWh
	47 km
	5
	\$32,299 [-\$6,500]
	\$906 / 20,000 km



HYUNDAI



KONA ELECTRIC

	Small SUV
	Fully electric
	64 kWh
	415 km
	5
	\$44,999 [-\$13,000]
	\$1,854 / 20,000 km



HYUNDAI



SONATA PLUG-IN HYBRID

	Mid-size
	Plug-in hybrid
	9.8 kWh
	45 km
	5
	\$44,899 [-\$6,500]
	\$718 / 20,000 km



JAGUAR



I-PACE

	Small SUV
	Fully electric
	90 kWh
	377 km
	5
	\$89,800 [-\$3,000]
	\$1,652 / 20,000 km



KARMA



REVERO

	Subcompact
	Plug-in hybrid
	21 kWh
	60 km
	4
	\$149,000
	\$867 / 20,000 km



KIA



NIRO EV

	Station wagon: Small
	Fully electric
	64 kWh
	385 km
	5
	\$44,995 [-\$13,000]
	\$1,752 / 20,000 km



KIA



NIRO PHEV

	Station wagon: Small
	Plug-in hybrid
	8.9 kWh
	42 km
	5
	\$33,965 [-\$6,500\$]
	\$1,288 / 20,000 km



KIA



OPTIMA PLUG-IN HYBRID

	Mid-size
	Plug-in hybrid
	Unavailable
	45 km
	5
	\$43,995 [-\$6,500]
	\$748 / 20,000 km



KIA



SOUL EV

	Station wagon: Small
	Fully electric
	39.2 / 64 kWh
	248 / 383 km
	5
	\$42,595 [-\$13,000]
	\$1,764 / 20,000 km



LAND ROVER



RANGE ROVER SPORT PHEV

	SUV
	Plug-in hybrid
	12.4 kWh
	51 km (estimate)
	5
	\$93,000
	Unavailable



LAND ROVER



RANGE ROVER PHEV

	SUV
	Plug-in hybrid
	12.4 kWh
	51 km (estimate)
	5
	\$115,500
	Unavailable



LINCOLN



AVIATOR GRAND TOURING

	SUV
	Plug-in hybrid
	13.6 kWh
	34 km
	7
	\$81,000
	\$1,117 / 20,000 km



MERCEDES



EQC 400 4MATIC

	Unavailable
	Fully electric
	80 kWh
	350 km (estimate)
	5
	Unavailable
	Unavailable



MERCEDES



GLC 350e 4MATIC

	Small SUV
	Plug-in hybrid
	13.5 kWh
	39 km (estimate)
	5
	\$61,200 [-\$4 000]
	Unavailable



MINI



COOPER SE 3 DOOR

	Subcompact
	Fully electric
	32 kWh
	235 km (estimate)
	4
	\$42,736
	Unavailable



MITSUBISHI



OUTLANDER PHEV

	Small SUV
	Plug-in hybrid
	12 kWh
	35 km
	5
	\$43,998 [-\$6,500]
	\$789 / 20,000 km



NISSAN



LEAF

	Mid-size
	Fully electric
	40 / 62 kWh
	243 / 363 km
	5
	\$42,298 [-\$13,000]
	\$1,260 / 20,000 km



POLESTAR



POLESTAR 1

	Unavailable
	Plug-in hybrid
	34 kWh
	97 km (estimate)
	4
	\$199,000
	Unavailable



POLESTAR



POLESTAR 2

	Subcompact
	Fully electric
	78 kWh
	440 km (estimate)
	5
	\$69,000
	Unavailable



PORSCHE



CAYENNE E-HYBRID

	SUV
	Plug-in hybrid
	14.1 kWh
	21 km
	5
	\$93,000
	\$817 / 20,000 km



PORSCHE



PANAMERA 4 E-HYBRID

	Full-size
	Plug-in hybrid
	14.1 kWh
	23 km
	4
	\$117,800
	\$390 / 20,000 km



PORSCHE



TAYCAN 4S

	Mid-size
	Fully electric
	93.4 kWh
	320 km (estimate)
	4
	\$119,400
	Unavailable



SUBARU



CROSSTREK PHEV

	Small SUV
	Plug-in hybrid
	8.8 kWh
	27 km
	5
	Unavailable
	\$1,044 / 20,000 km



TESLA



MODEL 3

	Mid-size
	Fully electric
	Unavailable
	402 / 531 km
	5
	\$54,600 [-\$13,000]
	\$1,336 / 20,000 km



TESLA



MODEL S

	Full-size
	Fully electric
	Unavailable
	600 km
	5
	\$107,700 [-\$3,000]
	\$1,856 / 20,000 km



TESLA



MODEL X

	SUV
	Fully electric
	Unavailable
	528 km
	7
	\$114,700 [-\$3,000]
	\$2,336 / 20,000 km



TESLA



MODEL Y

	Unavailable
	Fully electric
	Unavailable
	483 km (estimate)
	7
	\$66,390
	Unavailable



TOYOTA



PRIUS PRIME

	Mid-size
	Plug-in hybrid
	8.8 kWh
	40 km
	5
	\$30,746 [-\$6,500]
	\$913 / 20,000 km



VOLKSWAGEN



E-GOLF

	Compact
	Fully electric
	35.8 kWh
	198 km
	5
	\$37,895 [-\$13,000]
	\$1,527 / 20,000 km



VOLVO



S90 T8 eAWD

	Mid-size
	Plug-in hybrid
	11.6 kWh
	34 km
	5
	\$74,950 [-\$4,000]
	\$312 / 20,000 km



VOLVO



XC40 RECHARGE

	Small SUV
	Fully electric
	78 kWh
	320 km (estimate)
	5
	Unavailable
	Unavailable



VOLVO



XC60 T8 eAWD

	Small SUV
	Plug-in hybrid
	11.6 kWh
	27 km
	5
	\$72,200 [-\$4,000]
	\$601 / 20,000 km



VOLVO



XC90 T8 eAWD

	SUV	
	Plug-in hybrid	
	11.6 kWh	
	29 km	
	7	
	\$74,950 [-\$4,000]	
	\$1,296 / 20,000 km	



A few vehicles announced for 2020-2021

During 2020, other all-electric vehicles may be added to the available selection, including the **Rivian R1T**, the **Tesla Cybertruck**, the **Bollinger B1** and the **VW ID Crozz**. Also, Toyota might offer a plug-in hybrid version of its popular **RAV4**.



Rivian R1T

VW ID Crozz

Toyota RAV4 Prime

For longer-term announcements...

Concept cars make us dream about the next best thing and can leave the impression that a newer technology is just around the corner. When it's time for a new car, this may bring some drivers to delay going electric. However, models presented in the previous pages demonstrate that the "cars of tomorrow" are in fact already here today and that they can meet a wide range of needs and preferences!

Plug-In Vehicles Table¹

The summary table presented in the following pages gathers the data of each model to facilitate comparison.

Legend for the plug-in vehicles table:

Type	Fully electric vehicle (EV) or plug-in hybrid electric vehicle (PHEV).
Category	Vehicle category, determined by Natural Resources Canada.
Base Price	Manufacturer's suggested retail price, for a base model without options. Delivery fees, air conditioning and tire taxes and any dealer charges are not included.
Batt. kWh	Battery capacity, in kilowatt hours (kWh).
E-range	Electric range, according to Natural Resources Canada. When marked with an asterisk (*) number indicated is an estimate.
Cons./100 km	Energy consumption per 100 kilometres (combined city/highway) kWh : Number of kilowatt hours (kWh) consumed per 100 km in electric mode. L : Number of litres consumed per 100 km in gasoline mode.
Seats	Seating capacity.
WD	Wheel drive: front-wheel drive (FWD), rear-wheel drive (RWD) or all-wheel drive (AWD).
OBC kW	On-board charger power, in kilowatts (kW).
FC	Fast charging compatibility (50 kW or more): Combo (CCS), CHAdeMO (CHA), Tesla (TA) or not compatible (N).
Savings²	Per 20,000 km/Per 100,000 km Vehicle usage-related savings, accumulated after 20,000 or 100,000 kilometres. Variable: gas price \$1.25/L.

¹ The data in the table correspond to the information available as of Fall 2019. In case of error or discrepancy, the car manufacturer's official documentation (websites and brochures) obviously takes precedence over the information in this document.

² See page 16 for more information on savings calculation.

PLUG-IN VEHICLES TABLE

See legend on page 43

Model	Type	Category	Base Price	Batt. kWh	E-Range	Cons./100 km		Seats	WD	OBC kW	FC	Savings	
						kWh	L					20,000 km	100,000 km
AUDI													
E-TRON 55 QUATTRO	EV	SUV	\$90,000	95	329	28.3	0	5	AWD	9.6	CCS	\$2,206	\$11,028
E-TRON SPORTBACK	EV	n.a.	n.a.	95	n.a.	n.a.	0	5	AWD	11	CCS	Data not available	
BMW													
530e XDRIVE	PHEV	Compact	\$68,200	9.2	24	30.2	8.3	5	AWD	3.7	N	\$448	\$2,241
745Le XDRIVE	PHEV	Full-size	\$122,300	n.a.	n.a.	n.a.	n.a.	4	AWD	n.a.	N	Data not available	
i3	EV	Subcompact	\$44,950	42.2	246	18.5	0	4	RWD	7.4	CCS	\$1,874	\$9,371
i8 COUPE	PHEV	Subcompact	\$150,650	11.6	29	30.6	8.7	4	AWD	3.7	N	\$791	\$3,953
CHEVROLET													
BOLT EV	EV	Station wagon: Small	\$44,800	66	417	17.8	0	5	FWD	7.2	CCS	\$1,768	\$8,841
CHRYSLER													
PACIFICA HYBRID	PHEV	Minivan	\$54,188	16	51	25.8	8	7	FWD	6.6	N	\$1,899	\$9,496
FORD													
ESCAPE TITANIUM HYBRID	PHEV	Small SUV	n.a.	n.a.	n.a.	n.a.	n.a.	5	FWD	n.a.	N	Data not available	
FUSION PLUG-IN HYBRID	PHEV	Mid-size	\$36,930	9	42	20.5	5.6	5	FWD	3.6	N	\$740	\$3,699
MUSTANG MACH-E SELECT	EV	Subcompact	\$50,495	75.7	355*	n.a.	0	5	RWD/ AWD	n.a.	CCS	Data not available	
MUSTANG MACH-E PREMIUM	EV	Subcompact	\$59,495	98.8	475*	n.a.	0	5	RWD/ AWD	n.a.	CCS	Data not available	

PLUG-IN VEHICLESTABLE

See legend on page 43

Model	Type	Category	Base Price	Batt. kWh	E-Range	Cons./ 100 km		Seats	WD	OBC kW	FC	Savings	
						kWh	L					20,000 km	100,000 km
HONDA													
CLARITY PLUG-IN HYBRID	PHEV	Mid-size	\$40,990	17	76	19	5.6	5	FWD	6.6	N	\$989	\$4,947
HYUNDAI													
IONIQ ELECTRIC	EV	Mid-size	n.a.	38.3	300*	n.a.	0	5	FWD	6.6	CCS	Data not available	
IONIQ ELECTRIC PLUS	PHEV	Mid-size	\$32,299	8.9	47	17.7	4.5	5	FWD	3.3	N	\$906	\$4,530
KONA ELECTRIC	EV	Small SUV	\$44,999	64	415	17.4	0	5	FWD	6.6	CCS	\$1,854	\$9,268
SONATA PLUG-IN HYBRID	PHEV	Mid-size	\$44,899	9.8	45	20.9	6	5	FWD	3.3	N	\$718	\$3,589
JAGUAR													
I-PACE	EV	Small SUV	\$89,800	90	377	27.5	0	5	AWD	7	CCS	\$1,652	\$8,258
KARMA													
REVERO	PHEV	Subcompact	\$149,000	21	60	34.7	11.5	4	RWD	6.6	N	\$867	\$4,335
KIA													
NIRO EV	EV	Station wagon: Small	\$44,995	64	385	18.6	0	5	FWD	7.2	CCS	\$1,752	\$8,761
NIRO PHEV	PHEV	Station wagon: Small	\$33,965	8.9	42	19.7	5.1	5	FWD	3.3	N	\$1,288	\$6,439
OPTIMA PLUG-IN HYBRID	PHEV	Mid-size	\$43,995	n.a.	45	20.7	5.7	5	FWD	n.a.	N	\$748	\$3,739
SOUL EV LIMITED	EV	Station wagon: Small	\$51,595	64	383	18.6	0	5	FWD	7.2	CCS	\$1,752	\$8,761
SOUL EV PREMIUM	EV	Station wagon: Small	\$42,595	39.2	248	18	0	5	FWD	7.2	CCS	\$1,764	\$8,821

PLUG-IN VEHICLES TABLE

See legend on page 43

Model	Type	Category	Base Price	Batt. kWh	E-Range	Cons./100 km		Seats	WD	OBC kW	FC	Savings	
						kWh	L					20,000 km	100,000 km
LAND ROVER													
RANGE ROVER SPORT PHEV	PHEV	SUV	\$93,000	12.4	51*	n.a.	n.a.	5	AWD	7	N	Data not available	
RANGE ROVER PHEV	PHEV	SUV	\$115,500	12.4	51*	n.a.	n.a.	5	AWD	7	N	Data not available	
LINCOLN													
AVIATOR GRAND TOURING	PHEV	SUV	\$81,000	13.6	34	37.5	10.3	7	AWD	n.a.	N	\$1,117	\$5,585
MERCEDES													
EQC 400 4MATIC	EV	n.a.	n.a.	80	350*	n.a.	0	5	AWD	7.4	n.a.	Data not available	
GLC 350e 4MATIC	PHEV	Small SUV	\$61,200	13.5	39*	n.a.	n.a.	5	AWD	7.4	N	Data not available	
MINI													
COOPER SE 3 DOOR	EV	Subcompact	\$42,736	32	235*	n.a.	0	4	AWD	n.a.	n.a.	Data not available	
MITSUBISHI													
OUTLANDER PHEV	PHEV	Small SUV	\$43,998	12	35	27.7	9.2	5	AWD	3.3	CHA	\$789	\$3,947
NISSAN													
LEAF S PLUS	EV	Mid-size	\$44,898	62	363	19.5	0	5	FWD	6.6	CHA	\$1,244	\$6,221
LEAF SV	EV	Mid-size	\$42,298	40	243	18.7	0	5	FWD	6.6	CHA	\$1,260	\$6,301
POLESTAR													
POLESTAR 1	PHEV	n.a.	\$199,000	34	97*	n.a.	9.2	4	AWD	11	CCS	Data not available	
POLESTAR 2	EV	Subcompact	\$69,000	78	440*	n.a.	0	5	AWD	11	CCS	Data not available	

See legend on page 43

PLUG-IN VEHICLE TABLE

See legend on page 43

Model		Type	Category	Base Price	Batt. kWh	E-Range	Cons./100 km		Seats	WD	OBC kW	FC	Savings		
														20,000 km	100,000 km
PORSCHE															
CAYENNE E-HYBRID		PHEV	SUV	\$93,000	14.1	21	45.5	10.8	5	AWD	7.2	N	\$817	\$4,086	
PANAMERA 4 E-HYBRID		PHEV	Full-size	\$117,800	14.1	23	40.3	10.5	4	AWD	7.2	N	\$390	\$1,951	
TAYCAN 4S		EV	Mid-size	\$119,400	93.4	320*	n.a.	0	4	AWD	9.6	CCS	Data not available		
SUBARU															
CROSSTREK PHEV		PHEV	Small SUV	n.a.	8.8	27	23.5	6.7	5	AWD	n.a.	N	\$1,044	\$5,218	
TESLA															
MODEL 3 STANDARD RANGE PLUS		EV	Mid-size	\$54,600	n.a.	402	14.9	0	5	RWD	7.6	T	\$1,336	\$6,681	
MODEL 3 LONG RANGE		EV	Mid-size	\$64,600	n.a.	531	16.1	0	5	AWD	11.5	T	\$1,312	\$6,561	
MODEL S LONG RANGE		EV	Full-size	\$107,700	n.a.	600	18.8	0	5	AWD	11.5	T	\$1,856	\$9,278	
MODEL X LONG RANGE		EV	SUV	\$114,700	n.a.	528	21.8	0	7	AWD	11.5	T	\$2,336	\$11,678	
MODEL Y LONG RANGE		EV	n.a.	\$66,390	n.a.	483*	n.a.	0	7	RWD	n.a.	T	Data not available		
TOYOTA															
PRIUS PRIME		PHEV	Mid-size	\$30,746	8.8	40	15.8	4.3	5	FWD	3.3	N	\$913	\$4,565	
VOLKSWAGEN															
E-GOLF		EV	Compact	\$37,895	35.8	198	18.6	0	5	FWD	7.2	CCS	\$1,527	\$7,636	

PLUG-IN VEHICLES TABLE

See legend on page 43

Model		Type	Category	Base Price	Batt. kWh	E-Range	Cons./100 km		Seats	WD	OBC kW	FC	Savings	
							kWh	L					20,000 km	100,000 km
VOLVO														
S90 T8 eAWD		PHEV	Mid-size	\$74,950	11.6	34	31.4	7.9	5	AWD	3.7	N	\$312	\$1,559
XC40 RECHARGE		EV	Small SUV	n.a.	78	320*	n.a.	0	5	AWD	n.a.	n.a.	Data not available	
XC60 T8 eAWD		PHEV	Small SUV	\$72,200	11.6	27	38.2	9.1	5	AWD	3.7	N	\$601	\$3,003
XC90 T8 eAWD		PHEV	SUV	\$74,950	11.6	29	31.6	8.8	7	AWD	3.7	N	\$1,296	\$6,479

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