

2019: The year of Electric Vehicles in BC

Vancouver, BC December 31, 2019 – for immediate release

Analysis released today by the Vancouver Electric Vehicle Association (VEVA) confirms that 2019 was a year of records for electric vehicles (EV) in British Columbia. Among the milestones:

- 2019 marks a full decade that modern electric production cars were available to BC consumers.
- The number of electric cars in use in BC more than doubled in the last 12 months, reflecting the highest adoption rates in the country, and highest on the continent.
- Public EV charging networks continue to grow, and programs for residential condo and workplace EV charging were formalized through BC Hydro.
- Electrification of other transportation beginning to take hold. 2019 witnessed the first electric seaplane trial in BC, and BC Ferries first two Island Class electric ferries are en-route for delivery in early 2020.
- Operating an electric car has distinct energy saving and carbon footprint advantages. VEVA quantifies them for British Columbians for 2019.

"Range anxiety is no longer a factor for most consumers" said Ron Burton, President of the Vancouver Electric Vehicle Association (VEVA). "The requirement now is for auto manufacturers to commence building pick-ups and larger trucks to fill the needs that cars don't meet."

Spokesperson John Stonier said "the success and spread of electric transportation in just 10 years shows the potential for BC to be a leader in fighting climate change while at the same time making our economy more efficient and productive."

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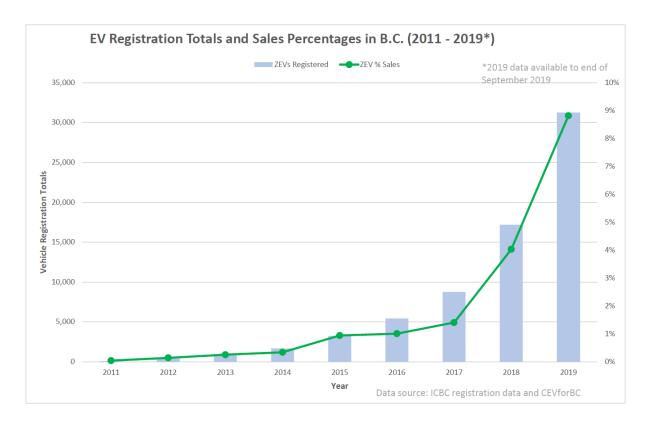
Background data and images attached:

- Electric Vehicles set adoption records for BC in 2019
- Addressing supply shortages for EVs in British Columbia
- Environmental and economic benefits of EVs



Background

Electric Vehicles set adoption records for BC in 2019



Source: EV registrations and percentage sales from 2011-19: http://news.gov.bc.ca/files/BC-EV-Registrations-2011-2019-graph.pdf

BC Ministry of Energy, Mines and Petroleum Resources news Release: https://news.gov.bc.ca/releases/2019EMPR0111-002292

Government purchase incentives were a driving force behind the adoption of electric vehicles (EVs) in British Columbia during 2019.



Tesla Model 3's awaiting delivery in Vancouver on September 23, 2019. Photo P.Dayson



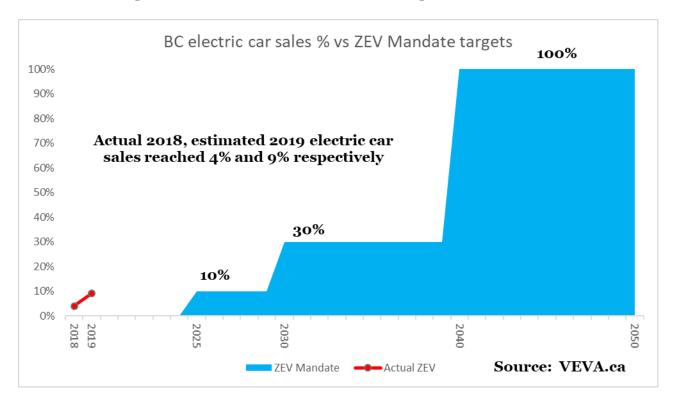
New this year was the Federal Government incentive of \$5,000 for all new vehicles under a base sticker price of \$45,000. In light of this the BC Provincial Government through the <u>Clean Energy Vehicles for BC Program</u> lowered its rebate to \$3,000 to enable a greater number of people to participate in the program.

BC's <u>Scrap-it</u> Program, having recycled approximately 45,000 cars since inception in 1996, provided 1,500 incentives for new and used electric cars in 2019. In 2020 that number rises to 1,750 \$6,000 incentives for new electric vehicle purchases, and 250 \$3,000 incentives for purchasing a used electric car. Competition for these rebates are in high demand.

Provincial rebates for a variety of other electric vehicles through the <u>Specialty-Use Vehicle Incentive Program</u>, which includes \$2,000 for electric motorcycles. Larger commercial fleet vehicles can qualify for up to \$50,000 in incentives under this program.

Electric Vehicle Adoption - Addressing Supply of EVs to British Columbia

A key reality in the adoption of electric cars is their availability from auto manufacturers to consumers. The gearing up of the supply chain and production of electric cars has taken time, and during this period demand has consistently outstripped supply. In 2019 the Province of British Columbia adopted the Zero Emission Vehicle Mandate, a requirement that new car dealers supply a minimum percentage of sales being electric vehicles for the light duty classification, similar in structure to the original 1990 ZEV Mandate in California that began the modern era electric car



Reference: BC Ministry of Transportation and Infrastructure, StatsCan New Car registrations, VEVA estimates for 2019

CleanBC Go Electric: https://goelectricbc.gov.bc.ca/



EV registrations and percentage sales from 2011-19: http://news.gov.bc.ca/files/BC-EV-Registrations-2011-2019-graph.pdf

BC Leading the Charge: Access to EV Charging at Home and at Work

Important to electric vehicle adoption is the ability for owners to charge at home, and at work. In 2018 Richmond City Council put forward <u>leading legislation</u> to ensure that all new multi-unit residential buildings are supplied electric power to 100% of all parking stalls in each development. Since then thirteen local communities in British Columbia have adopted these provisions in by-laws. Nineteen more communities in BC are now considering similar by-laws, with two more in Alberta, Toronto and three California cities.

Also this year, rebates for up to 50% of costs for home, apartment and workplace charging became formalized and managed by BC Hydro - <u>BC's EV charger rebate program</u>.

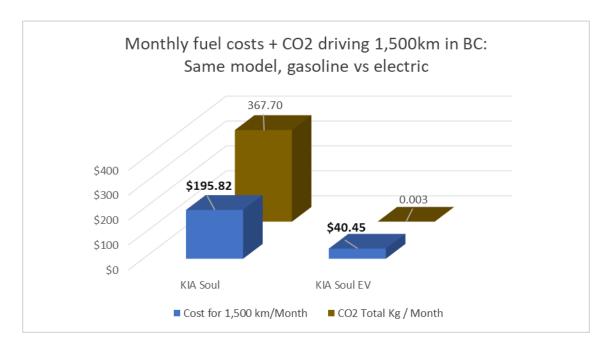
Benefits of electric vehicles: Clean air, reliable powerful performance and great economics.

While the broader aspects of electric vehicle transportation are yet to be fully developed, Vancouverites have enjoyed electric transportation since 1890 when the first electric streetcars launched. Today, efficient zero-emission electric trolley bus lines, Skytrain and Canada Line mass transit infrastructure replace the streetcars of old. And now, many cities in British Columbia are seeing electric cars on streets, not yet in the majority, but certainly visible on a regular basis.

Vancouver and Victoria are popular centres of electric car adoption, but it is. And why not? More and more communities are realizing that swapping petroleum fuel costs for electricity creates huge cost savings for the owners, which in turn helps those unspent petro-dollars and fuel taxes stay in your local community.

Here's the difference in costs per Km to run an equivalent internal combustion car to electric using average prices for 2019, and the representative GHGs for each:





References: USA EPA 2018 Kia Soul fuel economy ratings, Average 2019 BC gasoline prices 87 E10, BC Hydro residential tier 2 rates and GHG intensity reports. CO2 includes upstream emissions as well as tailpipe.

Public EV Charging Stations

2019 also saw a leap in public charging station growth. Key to full cross-country travel are convenient off-highway locations of fast charging stations, making stops short enough for the charge to get to your next destination, and sufficient time for a rest stop and refreshments. BC Hydro has been upgrading the provincial network of fast charging locations this year, to 80 by the end of the year, and spanning most major highways in the Province. As of December 17th, Petro Canada completed it's state-of-the-art Trans Canada fast charging network with the opening of its Victoria location. This network supports the increasingly popular CCS (Combined Charing System) format providing up to 350KW of power, as well as CHAdeMO format which is used by Japanese EV manufacturers such as Nissan. The 350KW CCS port is future oriented and while no car today can draw that amount of power, it will support the soon to be released Porsche Taycan with it's 800V battery pack.





December 17, 2019 – I to r: Patrick Ritchie GM Strategy, Mark Little CEO of Suncor, Wilf Steimle President EV Society of Canada, The Honorable Fred Haynes, Mayor of Saanich. (Photo-Suncor)

Extending electric drive to more vehicle types

A notable British Columbia world first! At daybreak on December 10th, 2019 Harbour Air founder and CEO Greg McDougall piloted the first all-electric seaplane flight in the first step to bring electric flight into commercial reality. Bringing zero emission and superb economic efficiencies to short haul seaplane service, a vital service throughout our province, will set BC once again as a leader in sustainable innovations. Attendees witnessing the flight at distance reported propeller noise as the only audible sound.





See video of Harbour Air's historic December 10, 2019 flight. (Photo: ASSOCIATED PRESS)

2019 also saw Metro Vancouver's <u>Translink</u> commence trials with all electric buses along the 100 Route serving New Westminster, Burnaby and Vancouver terminating at key Skytrain stations at each end. These trials are important for Translink as it prepares to electrify a large portion of its remaining internal combustion fleet to meet its Transportation 2050 goals of operating a 100% renewable energy fleet by 2050.





(Photo-Translink)

- BC Ferries's Island Class ferries en-route https://www.cheknews.ca/new-island-bound-hybrid-electric-ferries-clear-panama-canal-632887/
- https://www.bcferries.com/about/projects/island-class.html

More consumer vehicles:

In 2019 new auto industry entrants announced new vehicles and first delivery date commitments from two pickup truck leaders, <u>Rivian</u> and the <u>Cybertruck</u> by <u>Tesla</u>, both with Canadian delivery dates most likely in 2021.

Adoption of electric vehicles in BC means more than automobiles: a variety of dealers sell electric scooters and electric bikes, popular and cost-effective for commutes. In the larger motorcycle category, Zero Motorcycles, who supply electric motorcycles in BC through <u>Daytona Motorsports</u>, were joined this year by the availability of Harley-Davidson's <u>Live Wire</u>, which showed up in the <u>Vancouver showroom</u> in December.



Looking Forward to 2020

Auto manufacturers around the world are gearing up production. Tesla's new Shanghai giga factory went into production in the last days of 2019. Tesla has announced another giga factory for Berlin. Volkswagen is rolling out its new line of *Intelligent Design* ID series of all electrics. EV range continues to grow and battery production costs continue to decline, but we have yet to see a game changing technology to overtake lithium ion batteries in common use. We look forward to developments in capacitor/battery hybrids to increase performance and battery longevity in the new year. For consumers everywhere there will be a greater number and variety of used electric vehicles which enables a greater portion of the population to afford to acquire an EV – the key to lowering your car operating costs substantially!

In Vancouver <u>Downtown KIA</u>, a new electric car dealership at 8th and Burrard, has opened an EV Discovery Centre focused on providing consumers with information and support for going electric. More announcements to come in the new year.

Here at Vancouver Electric Vehicle Association, in the 31 years since we formed, we can now claim with gravitas that the electric vehicles are taking off. Perhaps in the next years electric cars may be the thing that take off, wait, - they already have with <u>Lilium</u>. Exciting times indeed.

About the Vancouver Electric Vehicle Association

VEVA was formed in 1988 as a non-profit society to promote the use and adoption of electric vehicles through educational and outreach to the general public, corporate and government leaders.

VEVA membership is open to the public and engages members with monthly Member meetings to hear the latest news and developments related to electric vehicles, socially through weekly Meet-ups, through on-line discussion forums, and through our annual electric vehicle extravaganza ElectraFest.

ElectraFest20, our 35th annual, will be held at the Roundhouse Community Centre in downtown Vancouver on Saturday August 15, 2020.

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