

Busting EV myths



1 “EVs have greater lifecycle emissions than gas cars”



Gas cars emit three times more pollution than EVs over their lifetime.

Globally, electric vehicles have been shown repeatedly to have lower lifecycle emissions than traditional gas-powered vehicles even in regions with fossil-fuel-dependent electricity grids. Specifically, studies have shown that EVs emit as much as 71% less carbon pollution than gas cars—that includes pollution from mining, manufacturing, and driving.³¹ What’s more, EVs are especially clean when battery recycling is included (up to 95% of the material from an EV battery can be recycled).³²

2 “EV batteries need replacing before the vehicle’s end of life”



EV batteries have been shown to last for more than 20 years of driving.

All EVs sold today include a battery warranty of at least eight years and 160,000 kilometres.³³ A recent study found that EV batteries degrade just 1.8% per year on average—meaning EV batteries can typically last more than 20 years.³⁴ Another analysis indicated that, out of 20,000 cars studied, only 2.5% have required a battery replacement, and most have occurred under warranty.³⁵ Tesla has claimed that the range on its Model S and X vehicles decreased by just 12% after 321,000 kilometers of driving (these models are older and therefore offer insights based on real-world data).^{36,37}

3 “EVs do not have enough range”



The average Canadian drives 60 kilometers per day—far less than the average EV range of 480 kilometres.

The average range of new EVs is now almost 480 kilometres—and rising.³⁸ Most Canadians drive less than 60 kilometres per day, while the average EV driver does between 80% to 90% of charging at home, usually just plugging in overnight for convenience.³⁹⁻⁴¹ As Canada’s fast-charging network grows, range and charging will become less of a concern for longer trips. There are now fast chargers at 20 out of 23 ONroute rest stops in Ontario, while PetroCanada has already installed chargers along the TransCanada highway from Halifax to Victoria.⁴² The Government of Canada has committed to deploy 84,500 chargers by 2029 and is on track to meet its 2026 target.^{43,44}

4 “The electricity grid can’t handle EVs”



With proper planning, grid-related issues are easily avoidable.

While the switch to EVs will require provinces to plan for EV growth, other countries around the world (EVs account for some 80% of new cars sold in Norway) have not experienced grid-related issues as a result of high EV adoption.⁴⁵ A Canadian government study on the anticipated electricity needs of EVs found that they would represent 3%, 16%, and 22% of electrical power demand in 2030, 2040, and 2050, respectively.⁷⁴ As the study states, “This number is significant, but since the growth is spread over 30 years, with most happening during the 2030 to 2050 timeframe, Canadian utilities have 10 years to refine the load forecast and plan for grid expansion.”