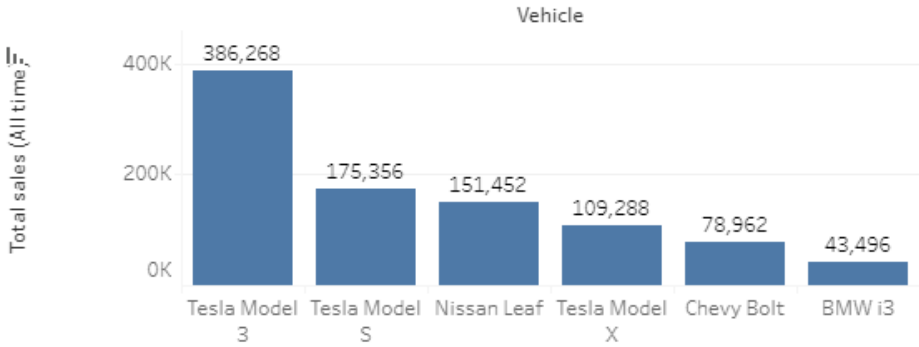


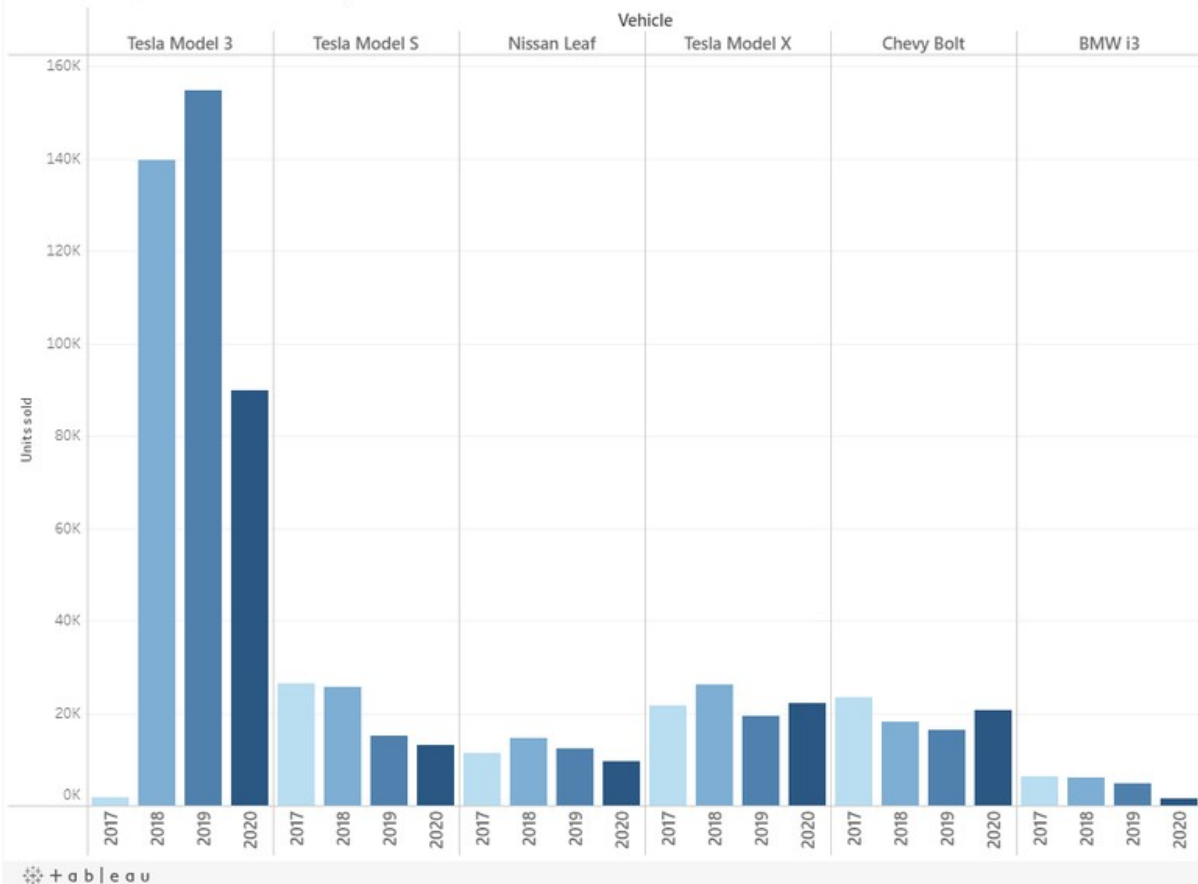
# Market Share and Competitive Analysis for the Tesla Model 3

The first modern fully electric vehicle to be mass produced and sold in the US was the Nissan Leaf, in 2010. Since then, the EV market has grown enormously; in 2020 about 2.5% of new vehicle sales were fully electric vehicles, and worldwide the figure is closer to 5%.<sup>1</sup> Tesla has dominated the US market since introducing its first mid-price car, the Model 3, in 2017.

**Best Selling EVS in the USA : Total units sold as of 2020**



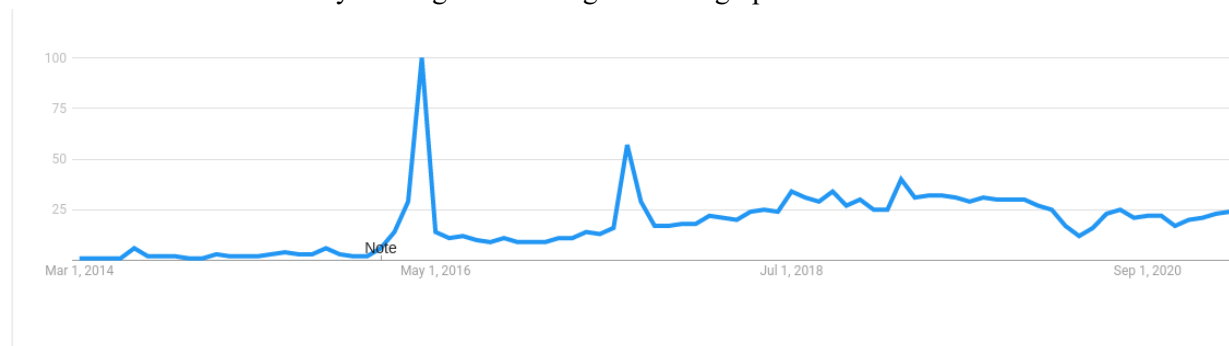
### Best Selling EVS in the USA by Year



(Source : <https://afdc.energy.gov/data/categories/vehicle-market> and <https://cleantechnica.com/2021/02/08/2020-us-electric-vehicle-sales-report/> )

(To see an interactive version of this chart with exact numbers, [click here.](#))

Tesla’s higher priced Model S (MSRP \$79,900) was already slightly outselling the Nissan Leaf (MSRP \$31,670) in this country in 2017 when the Model 3 (MSRP \$35,000) was introduced. In a way, Tesla’s most significant competitor in the US for the Model 3 is its own higher priced models. Tesla and its charismatic founder Elon Musk have proved very adept at grabbing media attention and creating buzz around it. We can see this by looking at this Google Trends graph for the term “Tesla Model 3”:

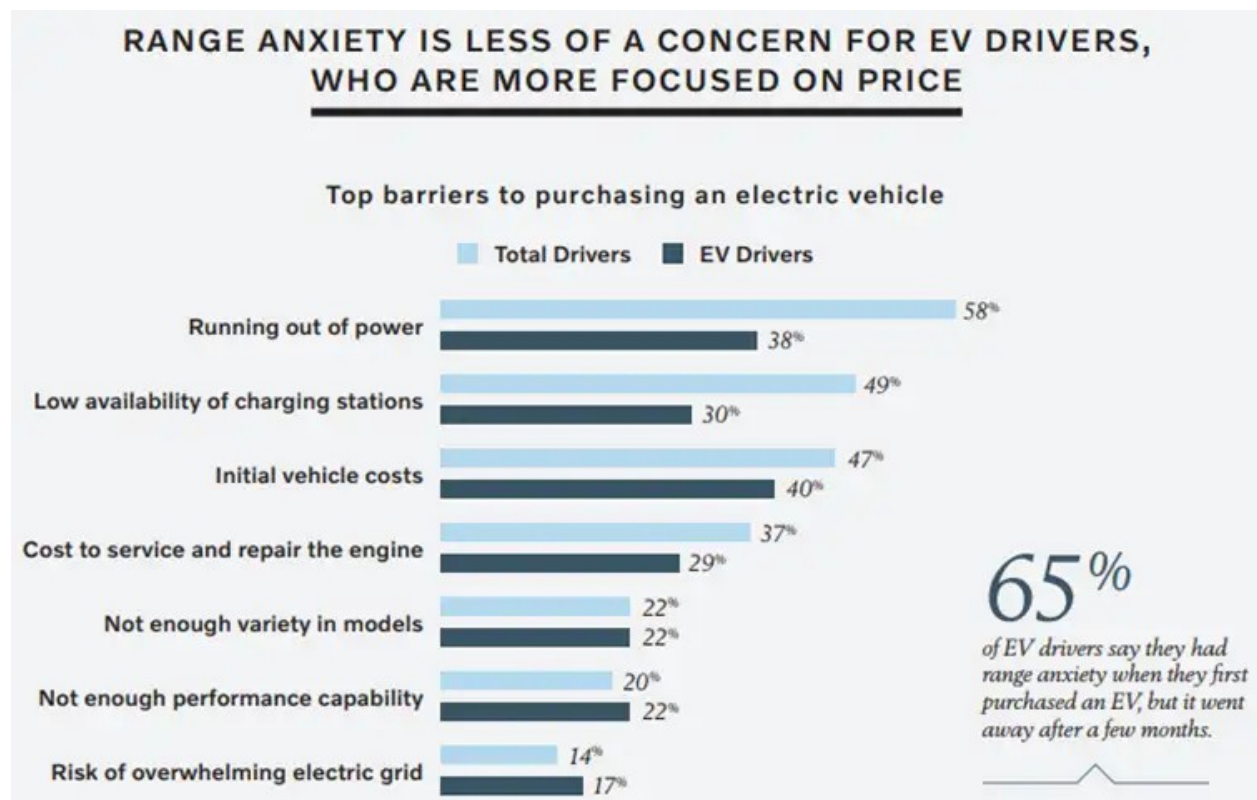


Interest in the Model 3 is very high starting in May of 2016, a full year before the car went into

production.

## Cold weather issues with EVs and consumer reaction

It is a fairly well-known fact that battery-powered vehicles lose some of their power generation and therefore driving range in frigid weather conditions. A study by Volvo in 2019 found that “range anxiety” and concern about access to charging stations is one of the greatest barriers to EV adoption:



(Source: [Americans Cite Range Anxiety, Cost as Largest Barriers for New EV Purchases:Study](#))

So, the issue of decreased range during winter months is one that manufacturers need to stay in front of if they wish to remain competitive in the market. I spent some time perusing user groups and blogs for EV owners, and it seems that cold weather issues are something that the vast majority of drivers are aware of, mostly because of efforts by the manufacturers to alert owners to the issue.<sup>2</sup> There are a few other cold-weather problems that Tesla owners are encountering due to the car’s design and deeply computerized operation, such as the recessed door handles getting frozen shut. These issues have been around for a while,<sup>3</sup> and the company has been addressing them with both software updates and design changes to newer vehicles, but new technologies always have bugs to work out and this is still not a

completely resolved issue.<sup>4</sup> Tesla does have one advantage over their competitors in this area, in that they have the most extensive network of charging stations (known as “Superchargers”) around the country. Tesla’s ownership of this network, and its control over its use, gives them a strong competitive advantage in terms of reliability and reputation.<sup>5</sup>

## About this report

Whenever possible, I have compiled the information in this report from government sources, consumer ratings agencies, and other neutral and authoritative sources. For the first two graphs, “Best Selling EVs”, I combined two data sources, as the U.S. Department of Energy source I used for most of the information was only current to 2019. The data for 2020 comes from Cleantechnica.com, who state that their values are estimates, but they have been publishing sales reports on electric vehicles since 2013 and have an established reputation in the field, so I believe their estimates are accurate and well-informed. Other sources I have used have all published extensively in the field of electric vehicles or green technology.

The most challenging part of writing this report was the rapidly evolving technology of electric vehicles, meaning that everything I read that did not have a very recent dateline had to be carefully checked to see if newer information was available. I used Google’s Search by Date feature quite a bit for this purpose, to verify that, for instance, the frozen door handle problem that was first mentioned in 2019 was something that Tesla owners were still encountering, and how the company was responding.

<sup>1</sup> <https://cleantechnica.com/2021/02/08/2020-us-electric-vehicle-sales-report/>

<sup>2</sup> <https://mashable.com/article/tesla-ev-cold-weather-polar-vortex/>

<sup>3</sup> <https://electrek.co/2018/11/14/tesla-model-3-cold-weather-flaws/>

<sup>4</sup> <https://electrek.co/2021/01/01/tesla-model-3-y-cars-plagued-heating-issues/>

<sup>5</sup> [Why Other Car Companies Don't Use Tesla Superchargers Road & Track](#)