

# WHEN WILL ELECTRIC CARS

BE AN AFFORDABLE OPTION  
FOR EUROPEAN CONSUMERS?

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More and more European consumers consider switching to an electric car<sup>1</sup>. In 2016, BEUC showed the average 4-year cost of running an electric vehicle in the EU should match that of a petrol car by 2024<sup>2</sup>.

Yet driving habits, preferences and legal systems differ across Europe. Consumer groups therefore wondered whether such national parameters affect the moment where electric cars ‘break even’ with fossil fuel cars. Which is why we conducted complementary studies in a series of European countries.

Our EU-wide finding was that that the transition towards lower emission vehicles could in general become financially interesting for European consumers. In how far does this hold true at the national level? And what are the differences between countries?

This factsheet summarises the main findings for 8 countries and provides insights into factors that are decisive to make electric cars an affordable & convenient option for consumers.



<sup>1</sup> <https://www.transportenvironment.org/press/forty-percent-europeans-say-next-car-they-buy-likely-be-electric-poll>

<sup>2</sup> Low carbon-cars in the 2020s: Consumer impacts and policy implications (BEUC, 2016) [https://www.beuc.eu/publications/beuc-x-2016-122\\_low\\_carbon\\_cars\\_in\\_the\\_2020s-brochure.pdf](https://www.beuc.eu/publications/beuc-x-2016-122_low_carbon_cars_in_the_2020s-brochure.pdf)

# HOW MUCH DOES OWNERSHIP OF AN ELECTRIC CAR COST EUROPEAN CONSUMERS? (IN COMPARISON TO A DIESEL CAR)

POSITIVE VALUES INDICATE EXTRA COSTS – NEGATIVE VALUES INDICATE SAVINGS



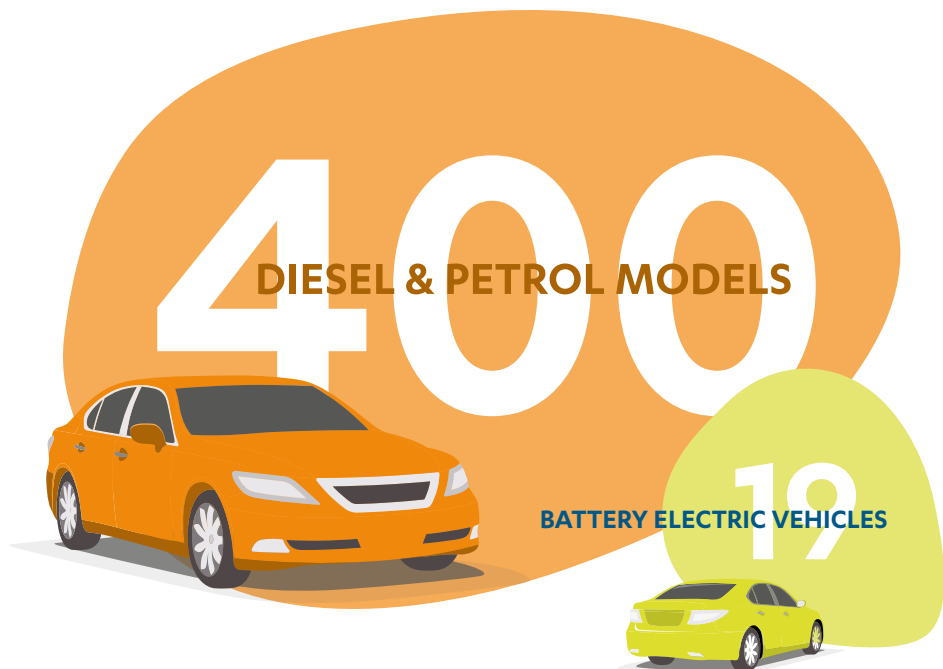
These studies show that four major parameters are important for electric cars to become an affordable & convenient option to consumers.

**Footnote:** Calculations by Element Energy. These are for a medium-sized car (C-segment) and monitor the cost of first-hand ownership for a period of 4 years. With two exceptions: the cost of ownership in Bulgaria is monitored for the period of 7 years, while that of Portugal for 6 years. This is as owners in these markets tend to retain their cars longer.

## THE OFFER OF LOW & ZERO-EMISSION VEHICLES IS BELOW PAR

Research<sup>3</sup> shows that people willing to switch to low-emission cars lack choice. Current sales practices often undermine the availability of low-emission car models in showrooms. In 2017, only 19 battery electric vehicles were available for purchase in Europe compared to over 400 diesel and petrol models. This is important as customers may not be willing to buy a car from a particular brand or may not like specific features of a model such as its styling or equipment.

Only with sufficient choice can people make their own cost/benefit analysis whether to opt for electric, hybrid or a more fuel-efficient conventional car.



<sup>3</sup> Element Energy (2018) Availability and Affordability of ZEVs.

## TAX POLICIES APPEAR TO SET THE PACE AT WHICH ELECTRIC CARS BECOME AFFORDABLE

The market for electric cars is just developing: today, they come in low volumes and at a significant cost premium. In the countries consulted, supportive tax and in-use incentives appear critical to influence purchasing decisions and shaping the market.

The existence – or lack thereof – of such policies is a main reason behind the current differences of car ownership cost in the countries analysed. In **France** a medium-sized electric car is already cheaper today than a similar size diesel car. In **Slovenia** the same car is heading closer to price parity. The contributor in both cases is a generous purchase incentive in both countries (€6,000 bonus in France, €7,500 in Slovenia).

Compare this to **Italy**, where taxation is based on engine power and foresees no incentive for cars that emit less CO<sub>2</sub>. A medium-sized electric here only becomes competitive with its diesel equivalent much later, once production volumes have increased and battery costs dropped. In **Portugal** electric cars are already competitive today. One reason for this is that Portuguese consumers keep their cars for a longer first ownership period (meaning there is more time to get a return on the initial investment). Electric cars are also exempted from registration tax, giving them an advantage over for example diesels.

Other benefits such as reduced electricity tariffs for overnight charging (**Spain**) or, to a lesser extent, exemption from circulation or ownership taxes (**Portugal, Italy**) also play a role though not comparable to direct purchase incentives. In **Lithuania**, the lack of any incentive – coupled with low fossil fuel costs – means a medium-sized electric car becomes cheaper later than in the other modelled countries.



## 3 CHARGING INFRASTRUCTURE AS LONG-TERM PLANNING PRIORITY

Studies<sup>4</sup> indicate that many EU countries have sufficient infrastructure to cope with the number of zero-emission cars currently on the road. Yet there is a need to plan future investment as the market expands. In this sense, a way forward is for EU and authorities to look into what makes mobility tick for consumers. One example here is increasing the coverage of rapid charging stations on major roads and in city centres. Another one is to tackle difficulties for home/workplace charging in areas where there is no immediate parking space.

## 4 ACCESSIBLE AND EASY CHARGING POSSIBILITIES

If e-mobility is to take off, consumer groups are aware that people must be able to charge their electric cars as seamlessly as they now fuel their conventional ones. For this, a **single source of information** to locate charging stations and their real-time availability – irrespective of providers – could be created. Access to these charging stations can also be improved through an **interoperable charging network**. It is also indispensable to think about daily life conveniences that people will expect to work, such as payments with credit card and cash. And should an electric driver have to be registered with a provider to be able to charge his/her car?

Charging times depend on a car's battery capacity, charging technology and type of recharging station. This makes it difficult for a consumer to know exactly how long he/she will wait before taking to the road again. Simple and reliable information about **charging times** and **transparent tariffs** are important considerations here.

<sup>4</sup> [https://www.transportenvironment.org/sites/te/files/publications/Charging%20Infrastructure%20Report\\_September%202018\\_FINAL.pdf](https://www.transportenvironment.org/sites/te/files/publications/Charging%20Infrastructure%20Report_September%202018_FINAL.pdf)

