

Electric car reaches space, but only makes it into the Czech Republic after a discount

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Summary

- The study summarizes the results of a questionnaire survey on public perceptions of electric vehicles and their purchase in the Czech Republic. 43 % of a representative sample of the adult population planned to buy a car within the next three years.
- Most (72 %) people who planned to buy a car within the next three years believed they would pay much more money for an electric car than for one with a combustion engine. Apart from the financial aspect, electric vehicles were perceived positively in many ways. Approximately 78 % of respondents who planned to buy a car believed that electric vehicles are less noisy, more environmentally friendly and emit less CO₂.
- However, most of them expected that within three years of the survey there would only be a limited number of service stations for electric vehicles in the Czech Republic (64 %), just a few public charging stations available in the Czech Republic (64 %), and battery life would be less than 8 years (58 %).
- In the second part of this study we analyse responses of people planning to buy a car within the next three years. Under the conditions in 2017 (when the survey took place), 12 % of these respondents were considering buying a hybrid or electric car (2.4 % of respondents were considering the purchase a battery electric car, 1.6 % a plug-in hybrid vehicle and almost 5 % a hybrid car).
- Lowering the purchase price of an electric car or its operating costs, improvement of technical characteristics and provision of additional benefits when purchasing an electric car increases the likelihood of an electric vehicle being chosen. The proportion of people choosing an electric vehicle could increase by approximately 0.5 % if there was a purchase price discount of CZK 100,000. However, for respondents who are already considering buying a hybrid or an electric car, this effect is 2.7-6.2 percentage points for every CZK 100,000 price reduction.

- People who plan to buy a car are willing to pay for a more fuel-efficient car: CZK 52,000 more on average for a reduction in operating costs of CZK 1 per 1 km for a new car and CZK 46,000 more for a more fuel-efficient used car.
- The driving range of electric vehicles is very important. Respondents are willing to pay about CZK 28,000 more on average for an increase in driving range of 100 km, which implies CZK 140,000 for an increase of 500 km.
- Battery-charging time is another important factor. Potential buyers would appreciate if the slow-mode recharging time was shortened to less than 4 hours. Fast-mode recharging time does not affect consumers' vehicle choice.
- In addition to subsidies for electric vehicle purchase, financial support for electrical wiring in households and free parking in cities would stimulate the purchase of electric vehicles. A free motorway toll sticker has a small influence on electric vehicle purchase and only in the used-car segment. Special traffic lane availability has no effect. People would accept an approximately CZK 40,000 higher price for a new electric car for each of these incentives that they value. The purchase price may be higher by 12-15 thousand CZK for each relevant incentive for the used-car segment.
- Information provided about emission reduction would motivate consumers to purchase electric vehicles. Willingness to pay is about 26-40 thousand CZK for each 20 % emission reduction, relative to emission volumes released by a conventional vehicle. Provision of information that clarifies the reductions in air quality has the same effect as information on CO₂ emissions.
- An improvement in several electric car characteristics significantly increases the likelihood of raising the market share of electric cars. If the purchase price of an electric car was an additional 50 % higher than that of a conventional car, extra benefits would be provided, operating costs reduced to CZK 50 per 100 km and a driving range of 500 km. The market share of electric vehicles on all newly registered vehicles could increase from the current 0.27 % to 8 %.