

Debating material

“To prevent the worst scenario of the climate change, the EU countries must shift to electric vehicles by 2035”

The planet Earth is experiencing a major crisis. We call it climate change or more precisely climatic disruption. In the last decades we could observe a dynamic growth of the average temperature. We used to call this phenomenon global warming, however the consequences of the growing temperature are much broader than just sea level rise. Recently the news is flooded with the reports from all over the world informing us about wildfires, floods, droughts, heat waves, insect outbreaks or strong hurricanes and tornadoes.

The global warming is connected to the massive production of greenhouse gases. Among them we rank carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O) and water vapor. Greenhouse gases have many origins. Some are produced naturally but the most of them are manmade. How? Basically, just by burning the fossil fuels. Therefore, we must focus on using other types of renewable sources of energy.

Nonetheless, many measures must be taken to tackle this issue. The EU commission had revealed the European New Green Deal, that introduces concrete plans and visions. The goal is to make Europe the first neutral continent in the world. This ambitious plan counts with the fact that the production of emissions will be reduced by 55% by 2030 compared to 1990 levels.

One part of the deal is dedicated to mobility as it is responsible for 27% of the emissions that are produced in our territory. The aim of EU is to transit to greener mobility that will offer clean, accessible and affordable transport even in the most remote areas. The Commission also promotes the growth of the market for zero- and low- emissions vehicles. From 2035 it will be impossible to sell/buy new fossil fuel-powered vehicles in the EU. The only solution we have are electric cars.

However, to this date there is not sufficient infrastructure for citizens to charge these vehicles for their journeys. To build this infrastructure enormous investments are needed.

Also the traditional automotive industry is an important employer in Central and Eastern Europe. By abolition of production of traditional fossil fuel-powered vehicles we risk rise of the unemployment rate. Specifically, in the Czech Republic 180.000 citizens work in that field. It also accounts for 25% of Czech export.

The automotive industry is crucial for Europe's prosperity. The automotive sector provides direct and indirect jobs to 13.8 million Europeans, representing 6.1% of total EU employment. 2.6 million people work in direct manufacturing of motor vehicles, representing 8.5 % of EU employment in manufacturing. The EU is among the world's biggest producers of motor vehicles. Between the years 2016-2020 motor vehicles were the third biggest export commodity.

Without any doubts there is the opportunity for vehicles' manufacturers to change to electroproduction. However, this transition requires massive investments into new technologies. There is the question of the actual location will be economically attractive.

Yet, the production of electric cars has its own drawbacks. Firstly, the purchase price is much higher for electric cars than the conventional ones. Nevertheless a 2018 study from the University of Michigan's Transportation Research Institute found that electric vehicles cost less than half as much to operate as gas-powered cars.

Secondly, electric cars have shorter range than gas-powered cars. The usual distance for one charge is 400 km. Also refuelling the vehicle takes much longer time, around 8 hours. That significantly reduces the comfort.

Another important point that needs to be mentioned is that for battery production some scarce resources are needed. The most problematic is cobalt as it is mined in some problematic areas such as Democratic Republic of Congo, Russia, or China. There is the risk that the demand will be too high in next decades that the current amount of cobalt available will not be enough.

On the other side there are efforts to find solutions how to make batteries without cobalt as Elon Musk promises. Lastly, there needs to be implemented system how to recycle the lithium that is used in the batteries, as of now we risk that it would end up in landfills.

To summarise, there is the need to greatly reduce the greenhouse gas emissions to stop further global warming and potential growth in extreme weather disasters. There are attempts coming from political EU elites. The new directive abolishes selling new fossil fuel-powered vehicles in about twenty years. As a result, the electric vehicles are seen as a solution for neutral emission transport. Vehicles powered by electricity show indeed many advantages such as energy efficiency, high performance, and low maintenance but number of disadvantages can be named as well. They rely on problematic cobalt mining; refuelling takes long time, and the battery enables the vehicle to travel to about 400 km distance.

Additional materials:

<https://www.halfords.com/motoring/advice/common-car-battery-problems.html>

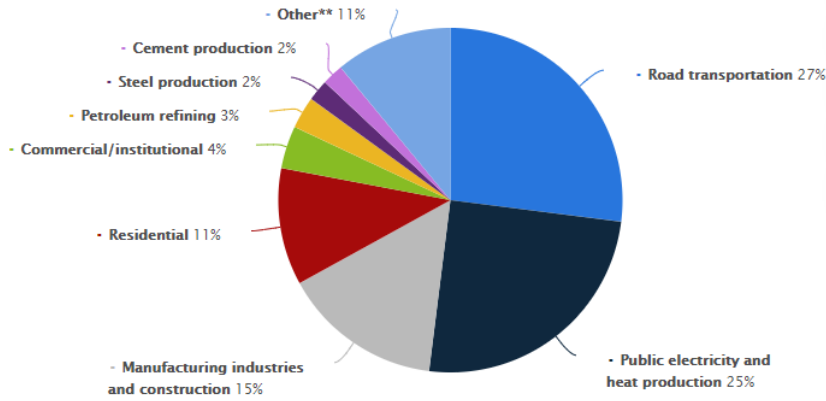
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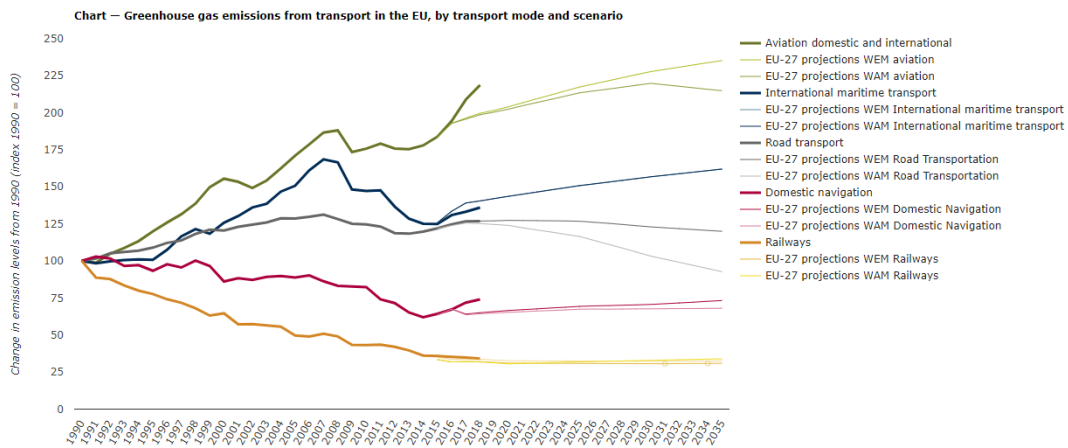
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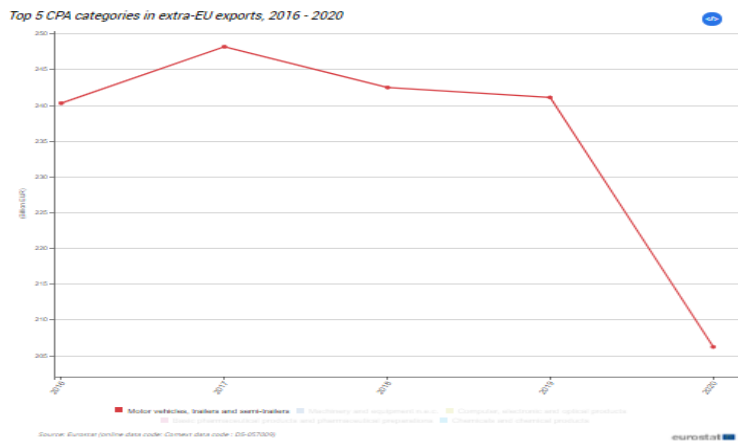
Visual support



CO₂ emission source in EU, source: <https://www.statista.com/statistics/999398/carbon-dioxide-emissions-sources-european-union-eu/>



Source: <https://www.eea.europa.eu/data-and-maps/indicators/transport-emissions-of-greenhouse-gases-7/assessment>



Source: https://ec.europa.eu/growth/sectors/automotive_en

Sources:

https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en

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