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FUTURE VEHICLE ELECTRIFICATION PERSPECTIVES

It's not a secret that the pace of electric cars development is really high nowadays. There are about 3 million of them on roads all over the world and the number of them being sold increases rapidly every year. The leading countries are China and The USA, with 1.2 m. and 380,000 electric vehicles sold by the end of 2019 correspondently. Also, about 320,000 electric cars were sold in Europe.

These rates show us that the age of electric vehicles is around the corner. Realizing that Mercedes Benz, for instance, spent about 10 billion of dollars on the electric vehicles development in 2019, when only about 3 billion were spent on modernizing their diesel engines. Another important factor is legislation, which gets tightened regarding to cars, with ICE (Internal Combustion Engine). Requirements for exhaust fumes are growing not only in the USA, China and Europe but worldwide. Legislative requirements are applied not only to car manufacturers and authorized dealers but also to final customers – car owners.

For example, London adopted a number of laws against cars with engines, operating on diesel fuel, that were produced before 2006. Their owners are obliged to pay 10 pounds per day for toxicity. Same law is planned to be adopted towards patrol engines in April this year. Norway, in its turn, reduced tolls and VAT (value added tax) for electric vehicles by 25 percent. Great Britain canceled tolls for electric vehicle and increased them for patrol and diesel cars.

Tesla Motors, the pioneer of electric vehicle development, signed a contract with the Chinese government about building a new Tesla automobile factory in Shanghai. It will become the first foreign electric vehicle manufacturer in China. It's the strategic step for both sides, given that the popularity of electric vehicles among the community and their development perspectives are steadily increasing.

If you look deeper, it may seem that electric cars are not that ecologically pure because of emissions from power plants that produce electric energy. Despite the fact that a lot of fossil fuels are needed to be burnt to produce electricity, later used by 'eco-friendly' vehicles, they are still more ecologically pure than petrol and diesel cars. Recent researches prove that manufacturing process and later exploitation of cars, operated on fuel, brings more relatively pollution. Moreover, recent developments show that electric cars can not only be no worse than classical ones with ICE, but they can be better, more modern and innovating.

Electric vehicles can be charged directly from the socket, easily found in every house, which, to my personal opinion, is more comfortable than driving somewhere in a way to find a gas station. Notwithstanding the longer charging time, this benefit is even greater considering that in some countries electricity consumed at night time is cheaper than during the day. In addition, electric engines are less noisy, have higher efficiency in comparison with ICE and, in fact, have relatively higher reliability and durability. Furthermore, they are much safer because electric engines, operating in electromagnetic brake mode, have an emergency brake feature that has already saved hundreds of lives.

In conclusion, I would like to say that most modern electric vehicles surpass their counterparts with ICE in power, comfort and safety levels. At the moment, mankind is still not ready to the complete vehicle electrification but it's moving steadily towards it.