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How are Electric Cars Taking over the World?

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Abstract:

This article provides information about when electric cars appeared and how electric cars have entered the world car market so quickly. From world-famous car manufacturers to new car companies that have recently entered the car market.

Keywords: *BYD, Tesla, Chinese market, Accumulator batteries, thyristor.*

INTRODUCTION: An electric car is a vehicle powered by one or more electric motors with a battery pack. At the beginning of the 20th century, electric cars were used as taxis, postal vans, utility vehicles, and passenger cars in Western Europe and the United States. Frenchman Camille Jenatzy made the electric car speed up to 100 km/h. However, the limited speed and low energy capacity (up to 20 W/h kg), the large mass of the batteries hindered the development of the electric car. Since the 1960s, the need for the use of electric cars in urban transport has increased due to the fact that the gas emitted from internal combustion engine cars poisons the air and increases noise. A single charge (energy reserve) of the batteries in an electric car is enough to travel up to 100 km. Batteries of electric cars are charged at special charging stations. When using an AC motor, there is a converter that converts it to DC.

Electric cars are intended for use in the city; the running part, the body is lightened, the transmission is separate and the batteries are easy to replace. Accumulator batteries are placed under the body, current comes to the engine through thyristor control units. The engine is mounted on drive axle units (front or rear) or cardan units, or on wheels. Using an electric car reduces noise and air pollution in cities, and allows saving liquid fuel. There are also electric cars in which electric energy is generated directly from liquid or gaseous fuel in the car itself. Electric cars are mainly produced in the USA, England, and Russia. In the USA and Germany, an experimental copy of electric cars was created (2005), which can travel up to 200 km on a single charge.

Main part

More and more people are concerned about the future of our planet. They are not only afraid of climate change and other environmental threats, but also try to do their part to protect the

environment. There are many ways to do this, from separate collection of waste to planting young trees.

One of the most effective is to replace your car's internal combustion engine with an electric car. If this happens on a mass scale, it will be possible to reduce the emission of pollutants into the atmosphere that cause global warming. However, environmental friendliness is not the only advantage of electric cars - they are cheaper to maintain, more convenient and safer.

Many people do not know this - the first electric car appeared long before the car with an internal combustion engine. The first moving model with an electric motor was created by the Hungarian inventor Jedlik Anyos in 1828, and the first gasoline-powered car appeared in Vienna in 1870. Later, these two directions developed in parallel, electric and gasoline vehicles had approximately the same driving characteristics, but due to the complicated charging process, electric cars were forced to retreat.

In the 1970s, interest in electric cars increased slightly during the global energy crisis, when fuel prices rose sharply. But in the early 1980s, the situation in the oil market changed, and the process of electrification of personal transport began to decline.

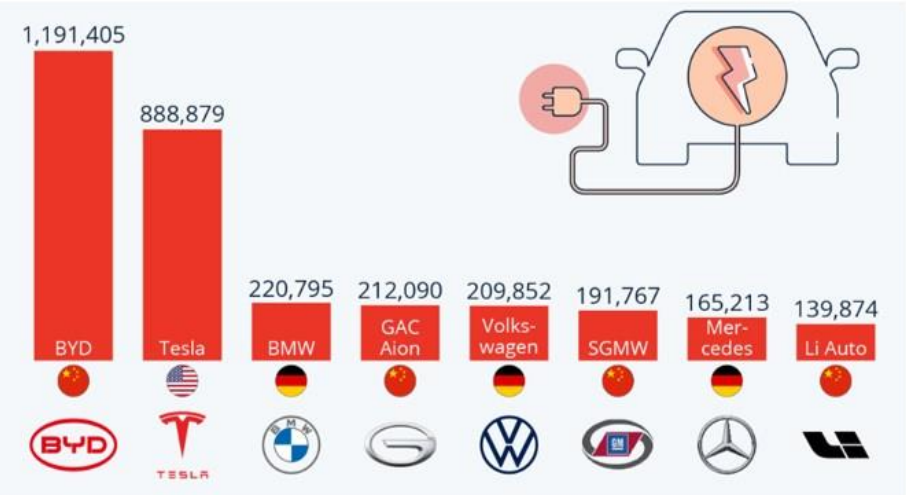
In the 21st century, electric cars began to become popular again - due to the steady increase in the price of petroleum products and the development of technology, it became possible to produce electric cars that are in no way inferior to an internal combustion engine car. In 2008, the American car company Tesla Motors released its first electric car, and then leading European, American and Japanese companies such as Nissan, BMW, Mitsubishi and Chevrolet joined the process of converting products to electric traction.

Many of the world's leading car manufacturers attended IAA Mobility 2023 in Munich, where the future of electric cars once again took center stage.

Although German car brands such as Volkswagen, Mercedes and BMW perform well in their home countries, they have recently ranked lower in electric car sales internationally.

The reason is that they continue to work on international internal combustion engines. But more specialized companies such as Tesla and Chinese market leader BYD have come forward.

The figure below represents global electric vehicle sales by brand in the first half of 2023.



In the first half of 2023 alone, BYD sold almost 1.2 million electric vehicles (including plug-in hybrids), which is almost twice the volume of BMW, Volkswagen and Mercedes combined. Having overtaken Volkswagen as the number 1 car brand in China, the company is now taking over Europe.

Between January and July 2023, the company sold 92,469 electric cars overseas, which is higher than the total for 2022.

CONCLUSION: On the scale of Uzbekistan, the value of electric cars imported in the last three months has exceeded 400 million dollars. According to the press service of the Customs Committee, from January to November 2023, 22,500 electric cars were imported into the territory of Uzbekistan. Compared to the same period in 2022, the import volume has increased more than 6 times, the total value of passenger electric vehicles delivered to the republic was approximately 580 million dollars.

China has retained its position as the main supplier of electric vehicles. From the beginning of 2023, an average of 21,000 electric cars were imported from China. The second place was taken by Hong Kong, where about 1,300 electric cars were imported.

UAE (150 cars), South Korea (140), USA (135) and Germany (125) are in the next places. If the total percentage of electric vehicles imported to our country is taken as 100%, it becomes clear that 92% of electric vehicles are imported from China.

REFERENCES

1. Abduqayumovna, K. M., & Qayumjon o‘g’li, A. S. (2022). MEN SEVGAN YETUK OLIMLAR. Journal of new century innovations, 19(5), 125-129.
2. Azizbek, M., Dilnoza, B., & Sarvarbek, A. (2024). CAUSES OF TRAFFIC ACCIDENTS AND MEASURES TO PREVENT THEM. ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ, 37(3), 61-63.
3. Azizbek, M., Dilnoza, B., & Sarvarbek, A. (2024). IMPROVING THE BRAKE SYSTEM OF THE KOBALT CAR. ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ, 37(3), 57-60.
4. Muhammadjonov Azizbek, Baxromjonova Dilnoza, & Azimov Sarvarbek. (2024). Highways, Functions and Importancein the Republic of Uzbekistan. American Journal of Language, Literacy and Learning in STEM Education (2993-2769), 2(1), 129–133. Retrieved from https://grnjournal.us/index.php/STEM/article/view/2604
5. Dilnoza, B., Azizbek, M., & Azimov, S. (2024). AUTOMOBILE INDUSTRY IN THE REPUBLIC OF UZBEKISTAN AND BUSINESS DEVELOPMENT TENDENCIES. ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ, 37(3), 53-56.
6. Qayumjon o’g’li, A. S., & Ilhomjon o’g’li, S. M. (2023). KOMPRESSIO HALQA JOYLASHGAN QISMNING HARORATINI PASAYTIRISH USLUBLARI. Новости образования: исследование в XXI веке, 1(6), 1567-1574.
7. Qayumjon o’g’li, A. S., & Sulaymonovich, T. S. (2022). DEVELOPMENT OF A MACHINE FOR CUTTING COTTON. Новости образования: исследование в XXI веке, 1(5), 192-198.
8. Tavakkal o‘g, Q. C. I., Ilhomjon o‘g‘li, S. M., & Qayumjon o‘g‘li, A. S. (2022). YER OSTI QUVURLARIGA GRUNT BOSIMI. BIR JINSLI GRUNTDA JOYLASHGAN QUVURGA GRUNTNING O ‘RTACHA VERTIKAL BOSIMI. Новости образования: исследование в XXI веке, 1(5), 287-292.
9. Qayumjon o’g’li, A. S., & Ilhomjon o’g’li, S. M. (2022). DVIGATELLARINING QUVVATI VA TEJAMKORLIGINI ORTTIRISH YO ‘LLARINI TAXLIL QILISH. Новости образования: исследование в XXI веке, 1(5), 199-206.
10. Azimov, S., & Mirzaalimov, A. A. (2020). Carriers lifetime in silicon bases solar cell. Молодой ученый, (19), 97-101.
11. Azimov, S., & Mirzaalimov, A. A. (2020). Potential barrier in silicon solar cells. Молодой ученый, (19), 94-97.