## **Automotive & Electro vehicles Production Project**

Technology Transfer or Joint Project of automotive and electro vehicle production in Kazakhstan.

## **Global Market Inside & Forecast**

According to the International Energy Agency (IEA), by the end of 2021, the number of electric vehicles on the world's roads was about 16.5 million, three times more than in 2018. Sales of electric vehicles in 2021 doubled compared to 2020 and reached 6.6 million units. Despite tight global supply chains, sales continue to grow strongly, with around 2 million electric vehicles sold globally in the first quarter of 2022, up three-quarters year-over-year. 2022 global EV sales forecast to increase 34.4% year-over-year to 6.3 million units.

## **Japan Market Inside**

Historically one of the world's leading car manufacturers, Japan lags behind China and the West in terms of electric vehicle production. In Japan, green vehicles are called clean energy vehicles or CEVs to distinguish them from fossil fuel vehicles.

Japanese companies are gradually shifting their focus to hybrid vehicles, as they are much cheaper than electric vehicles. Local manufacturers remain wary of electric vehicles due to issues with building charging infrastructure, the safety and cost of lithium-ion batteries, range problems, the supply of rare earths and minerals from Africa and other places that are needed to build engines and batteries.

Japan plans to achieve zero emissions by 2050 and reduce them by 46% by 2030.

In Japan, a barrier to the wider use of electric vehicles is related to batteries. In this we can help, because in Kazakhstan there is the possibility of mining and processing all three basic metals - Lithium, Nickel and Cobalt.

According to the data from the Kazakhstan National Economy Ministry, the tire industry in Kazakhstan produced around 3.3 million tires in 2020. This represents a decrease of approximately 12% compared to the previous year, which is attributed to the negative impact of the COVID-19 pandemic on the industry. In terms of specific types of tires, the majority of the production in Kazakhstan is focused on truck and bus tires, followed by passenger car tires, and then agricultural and industrial tires. The demand on track, bus, agriculture and industrial tires in Kazakhstan is much higher than local production now.

## Directions for possible cooperation in Kazakhstan

- 1 Joint creation of mini-factories for the production of battery components: electrodes, liquid and solid electrolytes, cases, etc., based on the latest nanotechnology and modified materials.
- 2 Recycling production of used storage batteries, with the development or transfer of economically and environmentally sound technologies with an affordable way to extract lithium, its compounds and other valuable metals.
- **3** Production of auto steel a) metallurgical smelting of auto steel and b) cold or hot rolling of auto steel in order to obtain auto sheet.
- 4 Organization of lines for stamping (equipment) of body panels (hood, doors, elements of a load-bearing body) on the territory of existing car assembly enterprises in Kazakhstan.
- 5 Organization of assembly production of cars, including relocation from other countries.
- 6 Production of truck and bus tires in Kazakhstan with local partner with potential to expand operations with production of passenger car tires.



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