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Electric Cars - the Real Future of Logistics

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Today the main problem of carriers - expensive fuel. And it goes without saying that electric trucks can be an effective solution. In addition, these vehicles can be an important response to environmental problems, as the European Union does not like the diesel units, which the most modern trucks have. So, it's time to see what's new on the market for electric trucks, and urban transport.

TESLA

There are two appropriate types of electric vehicles: heavy trucks and public passenger transport. They are in the early stages of development and should be ready next year.

NIKOLA MOTOR

In December 2016 the American company "Nikola Motor" presented a model of its electric car "Nikola One". This technology is 10-15 years ahead of all truck manufacturers in terms of efficiency, fuel consumption and emissions. “Nikola Motor” is the only company, that produces trucks with almost zero emissions. Moreover, the trucks are superior to diesel trucks with a load capacity of 36 tons [1].

BAYERISCHE MOTOREN WERKE (BMW)

In the summer of 2015 BMW decided to use the electric car for its own logistics needs. This 40-ton truck runs, non-threatening environment clean. It is driven only by an electric motor, which is charged from electricity, generated from renewable sources. According to the concern's calculations, the vehicle protects the environment from 11.8 tons of CO_2 per

year. The battery of the truck will be fully charged within 3-4 hours. But we should point out the fact that this car has one disadvantage: it can travel only 100 miles on a single charge.

MERCEDES

So, in July last year, the company "Daimler" presented its "Mercedes-Benz Urban eTruck" at the exhibition in Stuttgart. It is an electric truck with a permissible total weight of 26 tons, which can travel 200 km without recharging the battery. Serial production of this model is planned to begin in 2020.

VOLVO

Since 2007 the company "Volvo" has been conducting research in the field of alternative energy sources and has been looking for the most advanced technologies for electric vehicles.

A conceptual model called "Volvo Concept Truck" was presented in May 2016. Today, this model has been improved. The new prototype is not only improved aerodynamic properties, lower weight and rolling resistance, but a special hybrid (diesel and electric) powertrains. However, when transporting each standard on the hybrid propulsion system, the car can run no more than 30% of the time. Their conceptual model has been developed with the aim of increasing the efficiency of transport, and thus, they are designed to facilitate the industry's transition to energy-efficient modes of transport [2].

RENAULT

The range of eco-friendly trucks from the company "Renault" has several models. The first one is a 3-ton electric reefer car "Renault Midlum" (it can drive 140 km without charging) and the second is a 4.5-ton "Maxity Electric", in which the electricity (using electrodes) generated by a hydrogen fuel- cell, and the last one is a 16-ton "Renault Trucks D" with a 200-kilometer margin of Autonomous running. The manufacturer claims that its goal is to find

environmentally friendly solutions that will be profitable and effective for both the company and its customers.

FITZGERALD

The American truck manufacturer Fitzgerald is also involved in a new type of vehicle. The Ryder company will have to take care of the maintenance of the first electric car.

A few details about this "miracle on wheels." The new product belongs to the 8th class of trucks (such trucks are designed for transportation of bulky goods) and promises a range of 1300-1900 km. The model is equipped with six electric motors (one for each wheel), providing a total power of about 1000 horsepower. The electric car is driven by an electric motor with a battery capacity of 320 kW / h, the energy for which is supplied by a block of hydrogen fuel cells. At the same time, this car is not only extremely comfortable for the driver, but also has a number of other technological advantages, including those that significantly reduce its weight. Such a truck will cost about $ 375,000.

SCANIA

The “electrical” idea of this company is to create an electric trolley truck. To this end, the city and / or suburbs will need to have a network of electric wires (for example, trolleybus or tram lines) to which the trucks are connected through pantograph. In areas where there is no such infrastructure, trucks will work on a different type of fuel. Today, the lineup of environmental vehicles "Scania" includes model P320 - hybrid truck's electric motor and engine on biofuel. However, electricity is only enough for 45 km, but in terms of developing infrastructure of filling stations is negligible [1].

NISSAN

The Japanese company Nissan is working on a project "e-NT 400", the main advantage of which is that the battery of the truck, created on the basis of "Nissan Atlas", allows you to

charge up to 80 percent of its power in half an hour. The main disadvantage of this model is the short distance Autonomous driving (60 km). In the case of a 6-ton model "Mitsubishi eCanter" this figure increased to 100 km [1].

Other manufacturers are also working on electric vehicles. Many European companies are interested in these cars. For example, Donatas Nickus, the head of the logistics company "Baltic translin", says that fuel costs make up the bulk of all transport companies' expenses. But before buying a significant number of new-generation cars, the company must carefully weigh all the positive and negative (in terms of costs) consequences of such a decision. It is assumed that in Lithuania, this company will be one of the first to decide to use electric vehicles.

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