

FUTURE OF ELECTRIC TRUCKS: MYTH OR REALITY

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Electric trucks – vehicles that run on electricity – are among the most promising innovations in this area. They represent a significant step forward in the fight to lower emissions of carbon dioxide and other air pollutants. A growing sector of the transportation sector, electric trucks are becoming more popular as a result of improved battery technology, more stringent environmental laws, and the desire for sustainability. “Regenerative braking, which permits some energy to be recovered and returned to the battery during braking, an electric motor, which transforms electrical energy into mechanical energy, a battery, which stores the electrical energy needed to power the electric motor, and a control system, which oversees the electric motor and energy distribution, are the main parts of an electric truck” [1].

Three categories exist for electric trucks:

1) Light-duty trucks: These include vans and pickups that are utilized for both public and private use.

2) Medium-duty trucks: Frequently utilized for deliveries and local cargo.

3) Larger and able to handle greater cargo, heavy-duty trucks are built for long-distance transportation.

Like many different type of vehicles, electric trucks possess both advantages and some minor downsides.

The advantages are as follows:

- the performance of ET emits zero hazardous chemicals, such as CO₂ or other harmful substances into the atmosphere.

- considerable money reduction on gasoline because electric power required for charging is considered to be not so expensive as diesel fuel.

- low level of noise pollution that makes electric motors quite significant when driving in cities.

- much lower costs of regular maintenance because electric motors have fewer moving components, making break-downs less likely to occur.

What concerns downsides of electric trucks, so it is significant to name the following:

- limited driving range as compared to the diesel or petrol vehicles of comparable class.

- longer charging times compared to fuel-powered vehicles.

- unsuitable city infrastructure makes it almost unbearable to encourage the driving electric trucks.

Electric vehicle manufacturing is advancing rapidly, with both established and up-and-coming firms competing in the market. Some well-known producers of electric trucks are as follows:

1. Tesla: The Tesla Semi prioritizes performance and range in its design for freight transportation.

2. Rivian: renowned for producing delivery vans and electric pickups.

3. Nikola: Maintained its emphasis on battery electric solutions and hydrogen fuel cell technologies.

4. Ford: Provides electrified variants of its well-liked F-Series trucks.

5. Electric versions for commercial use have been introduced by Daimler and Volvo.

The precise numbers pertaining to the manufacture of electric trucks may differ according to the market demand, area, and year. The manufacturing of electric trucks, including semi-trailers, is expected to reach tens of thousands worldwide in 2023 and is still growing.

In the direction of a more environmentally friendly freight transportation system, electric vehicles are a big step forward. Businesses and society at large find them attractive due to their benefits, notwithstanding the difficulties. In the future of the transportation sector, electric vehicles are anticipated to be crucial due to continuous technical improvements and better infrastructure. One may argue that electric trucks will continue to advance and have a promising future.

References

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