Germany Heavy Duty Electric Truck Market, By Type [Box Trucks, Dump Trucks, Tanker Trucks, Flatbed Trucks, Others], By Application [Long Haul, Urban Delivery, Waste Management, Others], By Propulsion Type [Battery Electric Vehicle, Hybrid Electric Vehicle, Others], By Range [Below 200 Kilometer , 201-400 Kilometer, Above 400 Kilometer], By Region, Opportunities and Forecast, 2018-2033F

Market Report | 2025-06-16 | 125 pages | Market Xcel - Markets and Data

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Report description:

Germany heavy duty electric truck market is projected to witness a CAGR of 31.77% during the forecast period 2025-2032, growing from USD 587.15 million in 2024 to USD 5,336.81 million in 2032. The market is experiencing considerable growth, and it is expected to grow with the significant CAGR during the forecast period. Heavy duty electric trucks are designed to meet the growing demand of commercial and industrial applications. Unlike traditional trucks, that depend on an internal combustion engine to run on diesel or gasoline, which has an environmental impact, electric trucks support sustainability. The high-capacity batteries, advanced charging systems, powerful electric motors, regenerative braking, and an integrated management system enable the trucks to carry large payloads and handle long distances like their diesel counterparts.
Greenhouse gas emissions have increased demand for electric trucks, which are environmentally sustainable compared to diesel-powered conventional trucks, since governments across the region and organizations impose stricter emissions regulations, set ambitious climate targets, and work on the growing need for technologies that can reduce carbon footprints. To meet the target of zero emissions, key market players are shifting to electric trucks as they reduce greenhouse gas emissions, adopt regulatory compliance, and establish a cleaner profile to enhance their companies. Therefore, the need for cleaner transport significantly pushes the demand for electric trucks within the market.
For instance, in the first quarter of 2024, heavy trucks represented more than three-quarter of all heavy duty vehicle sales in the European Union. During this period, Germany continued to lead in zero-emission heavy truck sales in the European Union.
Advancements in Battery Technology Drive Market Growth

Advances in battery technologies are central to the development of heavy duty electric trucks, increasing the range of electric trucks, enabling long-distance journeys and, reducing the fear of running out of charge. Fast charging ability decreases downtime, an essential part of increasing productivity. Reduced maintenance costs and lower battery costs make electric trucks comparatively less expensive. Improved performance ensures these trucks will meet the stringent demands of heavy duty applications. All these technological advances will only push more electric trucks into commercial space.

For example, in October 2024, MAN Truck & Bus SE introduced its eTruck with an innovative solid-state battery system. This new technology improves energy density and charging speed, extending trucks' range considerably. This development reinforces Germany's commitment to low-emission, heavy-duty transport.

Lower Operational Costs and Reduced Maintenance Requirements Fuel Market Growth

Lower operational costs and reduced maintenance requirements boost the Germany heavy duty electric truck market. Electric trucks can offer adequate fuel savings because they do not incur diesel costs and rely on better energy efficiency. Also, they have fewer moving parts which result in less wear and tear, so maintenance is reduced. Electric trucks are competitive in pricing in combination with growing government incentives and improved charging infrastructure. Increasing adoption of heavy duty electric vehicles by fleet operators ensuring cost savings and compliance with the most challenging environmental regulations further drives market growth.

For instance, in September 2024, General Logistics Systems Germany GmbH & Co. OHG introduced its first battery-electric lorry, the Volvo FH Electric, into long-haul operations. The truck, with a 540-kWh battery, can be fully charged in two hours and has a range of up to 350 kilometers. General Logistics Systems Germany GmbH & Co. OHG aims to enhance sustainable transport, complementing its fleet of alternative-fuel vehicles, including (bio) LNG, HVO100, and hydrogen fuel cell trucks.

Favorable Government Regulations for Heavy-Duty Electric Trucks

The German government undertakes corrective measures in terms of vehicle pollution and has planned to offer tax rebates, grants to buy electric vehicles (EV), and subsidies to reduce the registration fees of such vehicles. The government is pumping money into zero-emission vehicles and increasing necessary infrastructure, like charging points, to make wide adoption of EVs possible. These initiatives reflect an integrated approach toward reducing GHG emissions and moving towards sustainable means of transportation. The German government passed a new law requiring truck carbon dioxide (CO_2) emissions to be reduced. Most new heavy-duty trucks sold by 2040 will be electric or hydrogen-powered and zero-emitting. To reduce CO_2 by 90%, truck manufacturers will have to lower the production of CO_2 in their fleet by 45% in 2030 and by 65% in 2035, a significant jump from previous projections of 30%.

Dominance in the Urban Delivery and Distribution Sector

Electric heavy duty trucks are of significant focus in Germany's delivery and distribution sector. It is very trendy in the short-haul and urban missions of the country related to city logistics, last-mile delivery, and waste collection. They are in high demand due to the ability to raise norms of strict emissions and low operating costs, along with noiseless operation, which is getting popular for city applications. While there's pressure from sustainability and European emission standards moving upward, the long-haul electric truck market is growing slowly and waiting for further development of batteries and charging infrastructure. Electric trucks will become indispensable in all freight transport with these technological improvements and their spread through the markets.

Future Market Scenario (2025 - 2032F)

- Advanced battery technology should be adopted to increase the range, reduce costs, and advance the use of heavy duty electric trucks.
- Energy-efficient heavy duty electric trucks will play a significant role as environmental concerns push for sustainable transportation.
- Fast-charging networks and warehouse charging facilities need to be improved and increased to support the practical rollout of electric trucks in long-haul and regional transport.
- Heavy duty electric trucks will be available in various designs and configurations to meet the diverse requirements of industry sectors.

Key Players Landscape and Outlook

Germany heavy duty electric truck market constantly innovates and moves on from the competition regarding performance, energy efficiency, and state-of-the-art features. Demand for sustainable transportation solutions and associated operational

efficiencies in the market are increasing. Suppliers are concentrating on the resilience of supply chains, developments in battery technology, and environmental practices that will characterize this industry's future. Increasing strategic alliances like Collaborations, partnership and emerging technologies will accelerate competitive play in this fast-changing sector. For instance, In June 2024, Scania CV AB launched Erinion, a new venture dedicated to charging infrastructure. This initiative will install 40,000 new charging points at customer locations, enhancing Scania Group's e-mobility presence and supporting the growth of electric transportation. In September 2024, AB Volvo announced a new heavy-duty truck with a range of up to 600 km on one single charge. The longer range represents a breakthrough for long-distance transport with zero tailpipe emissions.

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