

Electric Motorcycle Market - Global Industry Size, Share, Trends, Competition, Opportunity and Forecast, Segmented By Type (Standard, Cruiser, Sports), By Range (Less than 50 Km, 50-100 Km, 101-150 Km, Above 150 Km), By Battery Capacity (25 Ah), By Battery Type (Lead Acid and Li-ion), By Region & Competition, 2021-2031F

<https://marketpublishers.com/r/EEC66A839149EN.html>

Date: January 2026

Pages: 185

Price: US\$ 4,500.00 (Single User License)

ID: EEC66A839149EN

Abstracts

The Global Electric Motorcycle Market is projected to expand from a value of USD 51.91 Billion in 2025 to USD 145.64 Billion by 2031, registering a Compound Annual Growth Rate (CAGR) of 18.76%. These vehicles, defined as two-wheeled transport powered by electric motors and rechargeable battery packs, offer a zero-emission substitute for internal combustion engine models. The industry is largely bolstered by government-led initiatives, such as stringent emission mandates and financial subsidies that reduce acquisition costs, alongside the growing economic appeal of electric mobility due to rising petrol prices. Highlighting the efficacy of these drivers, the Society of Indian Automobile Manufacturers reported that electric vehicles captured over 6% of total two-wheeler sales during the fiscal year 2024-25.

Despite these positive indicators, the market faces a substantial hurdle regarding the insufficiency of charging infrastructure in numerous areas. This gap intensifies range anxiety among prospective customers, thereby restricting the vehicle's practicality for extended travel and retarding mass adoption even amidst a supportive regulatory and economic climate. Consequently, the lack of adequate charging networks remains a critical bottleneck that limits the broader utility and commercial expansion of electric motorcycles.

Market Driver

The development of charging infrastructure and battery swapping networks is fundamentally transforming the Global Electric Motorcycle Market by resolving critical adoption issues like range anxiety and lengthy refueling periods. Swapping technology has become especially crucial for commercial fleets requiring high uptime, enabling operators to exchange empty batteries for fully charged units in seconds rather than hours. This operational efficiency is vital for the financial success of the battery-as-a-service model, as evidenced by Gogoro Inc.'s 'Fourth Quarter and Full Year 2024 Financial Results' from February 2025, which noted that their battery swapping service revenue hit \$137.9 million in 2024. Such infrastructure progress boosts user confidence and facilitates wider vehicle deployment in dense urban settings.

Concurrently, favorable government policies and financial incentives act as the primary catalyst for mass market penetration, especially in price-sensitive developing nations. Legislators are expediting the transition away from internal combustion engines through direct purchase subsidies, tax breaks, and strict emission reduction goals. These regulatory actions have effectively focused demand in specific regions; according to the International Energy Agency's 'Global EV Outlook 2025' published in March 2025, China, India, and Southeast Asia comprised roughly 80% of global electric two-wheeler sales in 2024. Manufacturers are capitalizing on this support to increase production, with Hero MotoCorp reporting in a January 2025 press release that sales of its VIDA V1 electric scooter surpassed 46,662 units during the 2024 calendar year.

Market Challenge

The scarcity of charging infrastructure stands as a major obstacle hindering the widespread commercialization and acceptance of electric motorcycles. In contrast to traditional internal combustion engine vehicles that enjoy a pervasive refueling network, electric two-wheelers depend on charging points that are frequently unavailable, especially in non-urban areas. This deficit causes severe "range anxiety" for riders, given that electric motorcycles generally feature smaller battery capacities and shorter driving ranges than electric cars. As a result, the lack of reliable public charging stations confines these vehicles to short, predictable city commutes, making them unsuitable for long-distance journeys or inter-city logistics.

This functional constraint compels potential buyers to regard electric motorcycles as niche secondary vehicles rather than versatile primary transportation, thereby stalling mass market growth. The direct adverse effect of this hesitation is reflected in recent

market data; according to the Motorcycle Industry Association (MCIA), new electric motorcycle registrations in the UK fell by 7.7% in 2024 compared to the prior year. Such figures underscore how infrastructure limitations continue to suppress demand and impede the sector's expansion, despite the presence of other favorable market conditions.

Market Trends

The integration of AI-enabled smart riding features is reshaping the sector by embedding intelligent operating systems that deliver predictive analytics, personalized controls, and improved safety. Manufacturers are advancing beyond basic telemetry to offer sophisticated capabilities like adaptive performance modes, real-time hazard detection, and over-the-air updates that continually refine vehicle behavior based on user habits. This technological evolution not only distinguishes products in a competitive market but also deepens customer engagement through connected ecosystems. Highlighting the extent of this integration, Ather Energy announced in a January 2025 press release that its fleet of smart electric scooters covered a cumulative 2.39 billion kilometers in 2024, yielding extensive data for further software optimization.

Simultaneously, the market is diversifying into high-performance and adventure segments, pivoting from strictly utilitarian urban commuting toward enthusiast-oriented electric mobility. Industry players are launching models with robust chassis designs, extended range, and superior torque to compete directly with large-displacement internal combustion engine motorcycles. This shift enables brands to secure higher margins and appeal to leisure riders who value speed and recreational capability. Illustrating the momentum in this premium category, LiveWire Group, Inc. reported in its 'Fourth Quarter and Full Year 2024 Financial Results' from February 2025 that unit sales of its electric motorcycles jumped by 138% in the fourth quarter of 2024 compared to the third quarter.

Key Market Players

Yadea Group

NIU Technologies

Hero Electric

Aima Technology

Energica Motor Company

Zero Motorcycles

Gogoro Inc.

TVS Motor Company

Honda Motor Co.

Ola Electric Mobility

Report Scope

In this report, the Global Electric Motorcycle Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Electric Motorcycle Market, By Type

Standard

Cruiser

Sports

Electric Motorcycle Market, By Range

Less than 50 Km

50-100 Km

101-150 Km

Above 150 Km

Electric Motorcycle Market, By Battery Capacity

25 Ah

Electric Motorcycle Market, By Battery Type

Lead Acid

Li-ion

Electric Motorcycle Market, By Region

North America

United States

Canada

Mexico

Europe

France

United Kingdom

Italy

Germany

Spain

Asia Pacific

China

India

Japan

Australia

South Korea

South America

Brazil

Argentina

Colombia

Middle East & Africa

South Africa

Saudi Arabia

UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global Electric Motorcycle Market.

Available Customizations:

Global Electric Motorcycle Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

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