India Electric Two-Wheeler Market By Vehicle Type (Scooter/ Moped, Motorcycle), By Battery Type (Swappable, Non-Swappable), By Battery Capacity Type (<2 kWh, 2-2.5 kWh, >2.5 kWh), By Range (<50 km, 50-100 km, 101-150 km, >150 km), By Region, Competition, Opportunities & Forecast, 2020-2030F

Market Report | 2024-11-30 | 87 pages | TechSci Research

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Report description:

The India Electric Two-Wheeler market was valued at USD 621.11 Million in 2024 and is expected to reach USD 3391.52 Million by 2030 with a CAGR of 32.70% during the forecast period. The electric two-wheeler market in India has gained significant momentum due to a combination of strong growth drivers. Rising fuel prices, environmental concerns, and government policies aimed at promoting electric mobility are key factors fueling the shift towards electric two-wheelers. The government's initiatives, such as the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) scheme and incentives under the Production-Linked Incentive (PLI) scheme, have created a supportive ecosystem for electric vehicle manufacturers. Furthermore, as urbanization increases, the demand for more affordable and eco-friendly transportation options in crowded cities is growing. These vehicles offer a practical solution, especially with their lower operating costs, reduced emissions, and ability to navigate through congested traffic more efficiently.

The market is also benefiting from technological advancements in battery systems, such as improvements in energy density and charging speed, which have enhanced the overall performance and convenience of electric two-wheelers. The development of more accessible and widespread charging infrastructure has further encouraged adoption. Another key trend is the rise of new players and startups in the electric vehicle space, bringing innovative designs, models, and features to attract a wider customer base. Consumer preferences are evolving, with an increasing inclination towards electric bikes and scooters due to their cost-effectiveness in the long term, ease of maintenance, and the growing environmental consciousness of the younger generation.

Despite the promising outlook, the industry faces a few challenges. The high initial cost of electric two-wheelers, largely driven by battery prices, remains a significant barrier to widespread adoption. While government incentives help offset this cost, price

sensitivity among the masses continues to be a challenge. Furthermore, the limited range of electric two-wheelers and concerns over charging infrastructure in rural and semi-urban areas also hinder adoption. However, opportunities remain abundant in this sector, with the potential for the development of more affordable, long-range models and further expansion of charging networks. With a growing commitment from both private players and the government to address these issues, the Indian electric two-wheeler market is poised for significant growth in the forecast period 2025-2030.

Market Drivers

Government Incentives and Policy Support

The Indian government plays a pivotal role in driving the growth of the electric two-wheeler market through various policies and incentives. Schemes like the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) provide financial support to manufacturers and consumers. The Production-Linked Incentive (PLI) scheme further incentivizes the production of electric vehicles, encouraging domestic manufacturing. These initiatives significantly reduce the cost burden for both consumers and manufacturers, promoting the widespread adoption of electric two-wheelers. For instance, In September 2024, the Minister of Heavy Industries for the Indian Union announced the forthcoming launch of the PM E-DRIVE subsidy scheme aimed at electric two-wheelers. Under this initiative, purchasers will be eligible for a maximum subsidy of up to USD 118.5 during the inaugural year of the PM E-DRIVE Scheme. The minister further elaborated that the subsidy for electric two-wheelers is determined by battery power, set at USD 59.25 per kilowatt hour, although the total incentive will be capped at USD 118.5 in the first year.

Rising Fuel Prices and Environmental Concerns

Escalating fuel prices, coupled with the growing awareness of environmental degradation, are pushing consumers toward more sustainable transportation solutions. Electric two-wheelers, with their lower running costs and zero emissions, present an attractive alternative to traditional gasoline-powered vehicles. As fuel costs continue to rise and the urgency to reduce carbon footprints intensifies, electric two-wheelers are seen as a practical and eco-friendly solution for urban commuters.

Key Market Challenges

High Initial Purchase Cost

One of the most significant challenges for the Indian electric two-wheeler market is the high upfront cost compared to conventional vehicles. While operational costs of electric vehicles are lower, the price of the battery is still a substantial portion of the total cost, making electric-wheelers less affordable for the average consumer. Even with government subsidies, the initial investment remains a barrier, especially in price-sensitive markets.

Underdeveloped Charging Infrastructure

Despite significant improvements in charging infrastructure, many areas, particularly rural and semi-urban locations, still lack sufficient charging stations. This underdevelopment is a major deterrent for prospective electric two-wheeler buyers who fear being stranded without a charging point. The expansion of charging infrastructure is essential to making electric two-wheelers a practical and convenient choice for all consumers.

Key Market Trends

Rise of EV Startups and Innovation

The electric two-wheeler market in India is seeing the rise of numerous startups that are introducing innovative products and models. These companies are bringing fresh designs, enhanced features, and affordable pricing to appeal to a wider consumer base. With a focus on offering a range of electric bikes and scooters that cater to varying needs from performance-driven models to budget-friendly options startups are rapidly shaping the market's evolution. For instance, the number of electric two-wheeler startups in India has surged from 54 in 2021 to over 150, driven by government initiatives to promote clean vehicles and reduce oil imports. Startups now hold seven of the top ten market positions, with Ola Electric leading at a 39% market share as of January 2024. The top five companies account for about 85% of total sales.

Growing E-commerce and Quick Commerce Boosting Demand

The rapid growth of e-commerce and quick commerce in India is driving demand for electric two-wheelers, particularly in last-mile delivery services. Companies in the logistics, food delivery, and e-commerce sectors are adopting electric two-wheelers to reduce operational costs, enhance delivery efficiency, and align with sustainability goals. The low operational costs and zero emissions of electric vehicles make them an attractive option for delivery fleets, while their maneuverability in crowded urban areas enhances delivery speed. As the demand for online shopping and fast deliveries continues to rise, electric two-wheelers are becoming a key

solution for businesses looking to meet these demands in a cost-effective and eco-friendly manner.

Segmental Insights

Vehicle Type Insights

The Indian electric two-wheeler market is divided into electric scooters/mopeds and motorcycles, each serving different consumer needs. Electric scooters and mopeds are popular in urban and semi-urban areas due to their affordability, ease of use, and suitability for short-distance commutes. They are lightweight, easy to ride, and cost-effective, making them ideal for city dwellers looking for an eco-friendly alternative to traditional two-wheelers. These vehicles are typically designed for daily travel, offering low maintenance and reduced operating costs.

Electric motorcycles cater to consumers seeking higher performance, longer ranges, and more powerful engines. These bikes appeal to a broader audience, including those looking for versatility, speed, and the ability to travel longer distances. With advancements in battery technology, electric motorcycles are becoming more competitive with traditional gasoline-powered bikes in terms of performance and range. They offer greater power, making them suitable for both city commuting and longer trips.

Both segments benefit from ongoing innovations in battery efficiency, faster charging, and improved energy management. While electric scooters and mopeds focus on affordability and convenience, electric motorcycles prioritize performance and versatility. The diversity in these vehicle types allows them to meet the varying needs of consumers, from cost-conscious city commuters to performance-driven riders.

Region Insights

In 2024, South India stands out as the dominant region in the electric two-wheeler market, driven by progressive government policies, strong environmental awareness, and a well-developed infrastructure for electric vehicles. States like Tamil Nadu, Karnataka, and Kerala have introduced incentives and subsidies that encourage both manufacturers and consumers to adopt electric two-wheelers. These efforts, along with favorable tax benefits, have accelerated the transition to electric mobility in the region.

Urbanization in cities such as Chennai, Bengaluru, and Kochi has made electric two-wheelers an attractive option for daily commuting, particularly due to traffic congestion and rising fuel costs. The growing availability of charging stations has addressed range anxiety, making electric vehicles more practical for residents. Additionally, South India□s eco-conscious consumer base, especially among younger populations, is fueling demand of sustainable transportation.

The region□s focus on infrastructure development, alongside public and private investments, has further boosted electric two-wheeler adoption. Lower operational costs, minimal maintenance, and pollution-free riding make electric vehicles a cost-effective choice for South Indian commuters. As government support continues and awareness grows, South India is expected to remain the leading region for electric two-wheelers in India.

Key Market Players

□□Hero Electric Vehicles Pvt. Ltd
□□Okinawa Autotech International Private Limited
□□Greaves Electric Mobility Private Limited
□□Ather Energy Limited
□□PuR Energy Pvt. Ltd
□□Ola Electric Mobility Ltd
□□TVS Motor Company
□□Revolt Intellicorp Private Limited
□□BENLING INDIA ENERGY AND TECHNOLOGY PVT LTD
□□Bajaj Auto Ltd

Report Scope:

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

□□ India Electric Two-Wheeler Market, By Vehicle Type:

o Scooter/ Moped

- Motorcycle

- India Electric Two-Wheeler Market, By Battery Type:
- Swappable
- Non-Swappable

- India Electric Two-Wheeler Market, By Battery Capacity:
- <2 kWh
- 2-2.5 kWh
- >2.5 kWh

- India Electric Two-Wheeler Market, By Range:
- <50 km
- 50-100 km
- 101-150 km
- >150 km

- India Electric Two-Wheeler Market, By Region:
- North India
- South India
- East India
- West India

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the India Electric Two-Wheeler Market.

Available Customizations:

India Electric Two-Wheeler 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).

Table of Contents:

India Electric Two-Wheeler Market By Vehicle Type (Scooter/ Moped, Motorcycle), By Battery Type (Swappable, Non-Swappable), By Battery Capacity Type (<2 kWh, 2-2.5 kWh, >2.5 kWh), By Range (<50 km, 50-100 km, 101-150 km, >150 km), By Region, Competition, Opportunities & Forecast, 2020-2030F

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