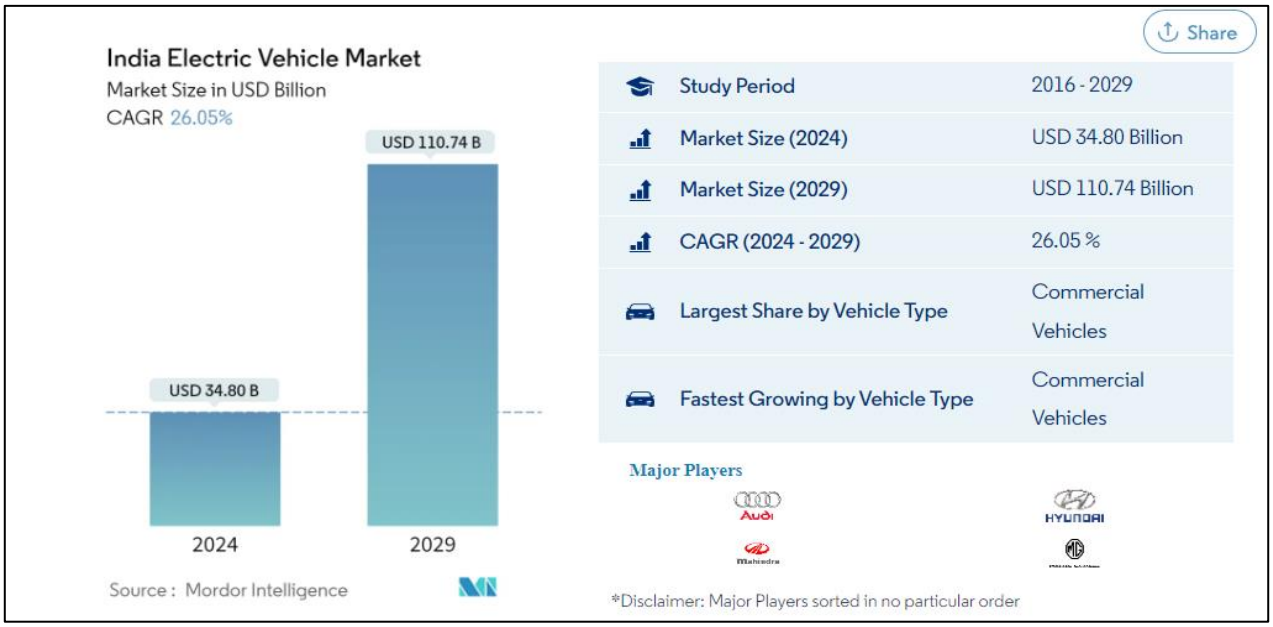
# Indian EV Market

- Statistics for the 2023 & 2024 India Electric Vehicle market size, created by Mordor Intelligence™ Industry Reports. India Electric Vehicle size report includes a market forecast to 2029 and historical overview.

## India Electric Vehicle Market Analysis:

The India Electric Vehicle Market size is estimated at USD 34.80 billion in 2024, and is expected to reach USD 110.74 billion or more by 2029, growing at a CAGR of 26.05% during the forecast period (2024-2029).

- Largest Segment by Fuel Type - HEV: The reasons influencing the rise of BEV are state subsidies and the continued encouragement of BEV adoption among Indian private automobile owners and corporate and leasing fleets.
- Fastest-growing Segment by Fuel Type - HEV: Government norms, incentives and rebates, and awareness of e-mobility are attracting consumers to buy EVs, further is making BEV the fastest-growing segment in the Indian electric vehicle market.
- Largest Segment by Vehicle Type - Commercial Vehicles: The passenger vehicle acquired the largest sales in electric vehicles in India, due to the increasing need of passenger vehicles and there are very few models of electric CV available in the India.



## India's EV Market Outlook:

By 2030, per a Bain & Co. report, electric two-wheelers could make up about 40 to 45 percent of all EVs sold in India, and electric passenger vehicles could make up about 15 to 20 percent. However, per a Niti Aayog report, the Indian government is aiming for EV adoption to reach 40 percent for buses, 30 percent for private cars, 70 percent for commercial vehicles, and 80 percent for two-wheelers by that timeline.

According to data from VAHAN, India's electric two-wheeler market experienced a notable surge in sales in the third quarter of FY 2023-24 (Q3 FY 24) compared to the previous quarter (Q2 FY 24), with a 34.42 percent increase. This uptick is also reflected by the robust sales in the ongoing fiscal – Q4 FY 24 – with **76,301 units sold**.

VAHAN serves as the flagship e-Governance application under India's National Transport Project, a Mission Mode Project launched in 2006. The VAHAN portal's primary objective is to automate RTO (regional transport office) operations nationwide, including vehicle registration, permits, taxation, and enforcement processes.

Meanwhile, the Economic Survey of India 2023 had forecast a robust 49 percent compound annual growth rate (CAGR) in India's domestic electric vehicle market between 2022 to 2030, with an estimated 10 million annual sales by 2030. Projections indicate that the EV industry is set to generate approximately 50 million direct and indirect employment opportunities within the next seven years.

### Government Initiatives

This success of EVs can be credited to a combination of factors, including government initiatives at both the central and state levels, a dedicated Industry focus, and growing public adoption of electric vehicles. Programs like Faster Adoption and Manufacturing of Hybrid and Electric Vehicles in India (FAME India), the Production-Linked Incentive (PLI) scheme for the Auto and Auto Component, and the PLI scheme for manufacturing advanced chemistry cell (ACC) batteries have proved instrumental in fostering local production and boosting EV adoption. The Government of India is also exploring the possibilities of switching all their vehicles to electric in the next few years.

States have also shown a growing interest in fostering the Industry and embracing EVs. Delhi, for instance, has set an ambitious goal of transitioning 80 percent of its city buses to electric power by 2025. Achieving this target requires a substantial increase in the number of e-buses, from 800 to an impressive 8,000.

A recent report by the Confederation of Indian Industry (CII) underscored the need for a minimum of 1.32 million charging stations in India by 2030 to support the rapid proliferation of electric vehicles. To maintain an ideal ratio of one charger for every 40 electric vehicles, India must install over 400,000 charging stations annually, culminating in 1.32 million chargers by the target year.

### Catalysing Global Change

The transformative boom in India's EV Industry is not only indicative of its domestic prowess but also has significant implications on the global landscape. The growth, industry participation, and ambitious goals set by India place it at the forefront of the international EV revolution. India's journey towards an electric future aligns with the broader global efforts to mitigate climate change, reduce greenhouse gas emissions and transition to sustainable transportation. As India paves the way towards a sustainable and electric future, it not only reduces its carbon footprint but also provides inspiration and a tangible blueprint for other developing countries to follow suit.

## Key Market Insights:

The COVID-19 pandemic has been unprecedented and staggering with Indian electric vehicles experiencing lower-than-anticipated demand across the nation compared to pre-pandemic levels.

India's electric vehicles recorded strong growth in 2021, supported by the government's implementation of favourable policies and programs. Uttar Pradesh held the maximum shares in EV sales in 2021.

The Indian automobile industry ranked fifth largest globally and is expected to become the third largest by 2030 as the demand for electric vehicles is growing tremendously due to population rise. So dependence on conventional energy resources is not suitable as India imports nearly 80% of its crude oil requirements. Moreover, NITI Aayog aims to achieve 70% penetration of EVs in all types by 2030, indenting to attain net zero carbon emissions by 2070. According to the Ministry of Heavy Industries, around 0.52 million were registered in India in the last three years.

## COVID-19 Impact:

This made a decline in automotive production and sales to hamper growth. This period was significantly challenging for electric vehicle manufacturers in India. Temporarily closed manufacturing facilities disrupted the supply chain, and the shortage of raw materials greatly affected the growth of this industry; the semiconductors crisis has adversely affected the production of these vehicles in India.

In India, around 4600 electric four-wheelers (e-4W) were sold in 2020. Due to COVID 19 induced lockdowns and reduced manufacturing output, the growth was slower than expected despite the anticipated growth from the FAME II subsidies provided by the Indian government on new electric vehicle purchases.

However, this market is witnessing a steady recovery boosted by Indian government initiatives, hefty subsidies, and incentives at the state level. For instance, in 2021, e-4W sales increased by around 287.1%. Furthermore, electric bus sales were relatively neutral, and FAME II backed e-bus deployment will support the market growth.

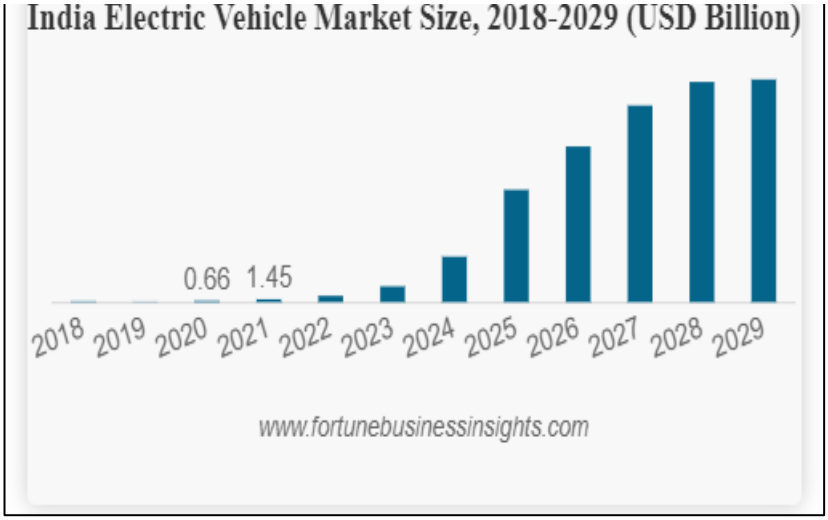
## Latest Trends:

The rising demand and adoption of electric micro-mobility vehicles such as electric two-wheelers and electric three wheelers is an ongoing trend in the market. Indian market is highly price-sensitive, and the majority of the Indian populace prefers two-wheelers for their daily transport due to rapidly growing traffic congestion. Therefore, in India low cost of electric two-wheeler and three wheelers compared to four-wheelers, coupled with the high suitability of two-wheelers to Indian road traffic conditions, is anticipated to boost the adoption of electric two-wheelers and three-wheelers during the forecast period.

For instance, the cost of electric two-wheelers in India is nearly USD 600 to USD 3,755, which is significantly lower than the cost of electric four-wheelers.

To satisfy the increasing demand, various domestic electric two-wheeler brands are also penetrating the market to grab revenue growth opportunities in rapidly growing automotive electrification in India.

Moreover, the Indian government's push toward e-mobility adoption by providing FAME India subsidies and inclining consumer preference towards electric micro-mobility is expected to boost the market in future years.




## Driving Factors:

Surging fossil prices in India are one of the major factors that are anticipated to drive the demand for electric vehicles in the region. The purchasing cost of fossil fuel-powered vehicles is lower than EVs.

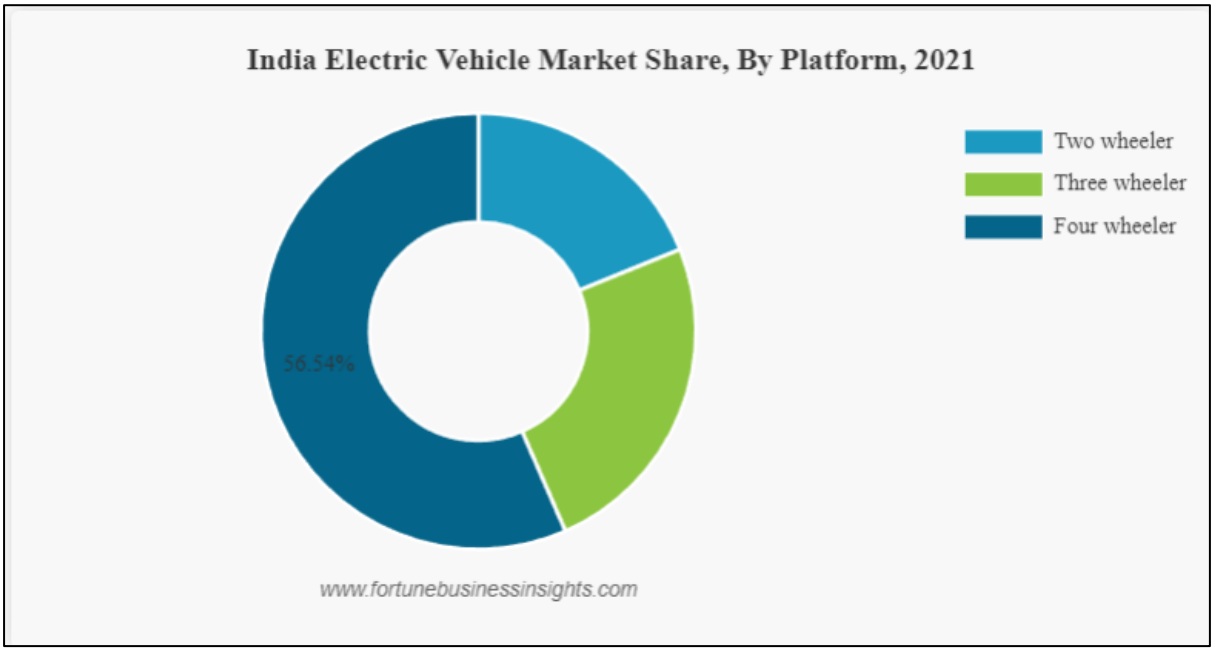
However, their operating cost is high due to surging gasoline and diesel prices. In contrast, the operating cost of electric type of vehicles is significantly less than that of fossil fuel-powered vehicles.

## Segmentation

**By Platform Analysis**

Based on platform market is classified into two-wheeler, three-wheeler, and four-wheelers. The four-wheeler segment dominated the market in 2021 and is expected to dominate India electric vehicle market forecast period. It is also expected to dominate during the forecast period with a maximum market share.

City commuters find it economical considering the range compared to (IC) Internal Combustion engines. Compared to two-wheelers, four-wheelers have larger space for batteries, which results in a higher range on a single charge.

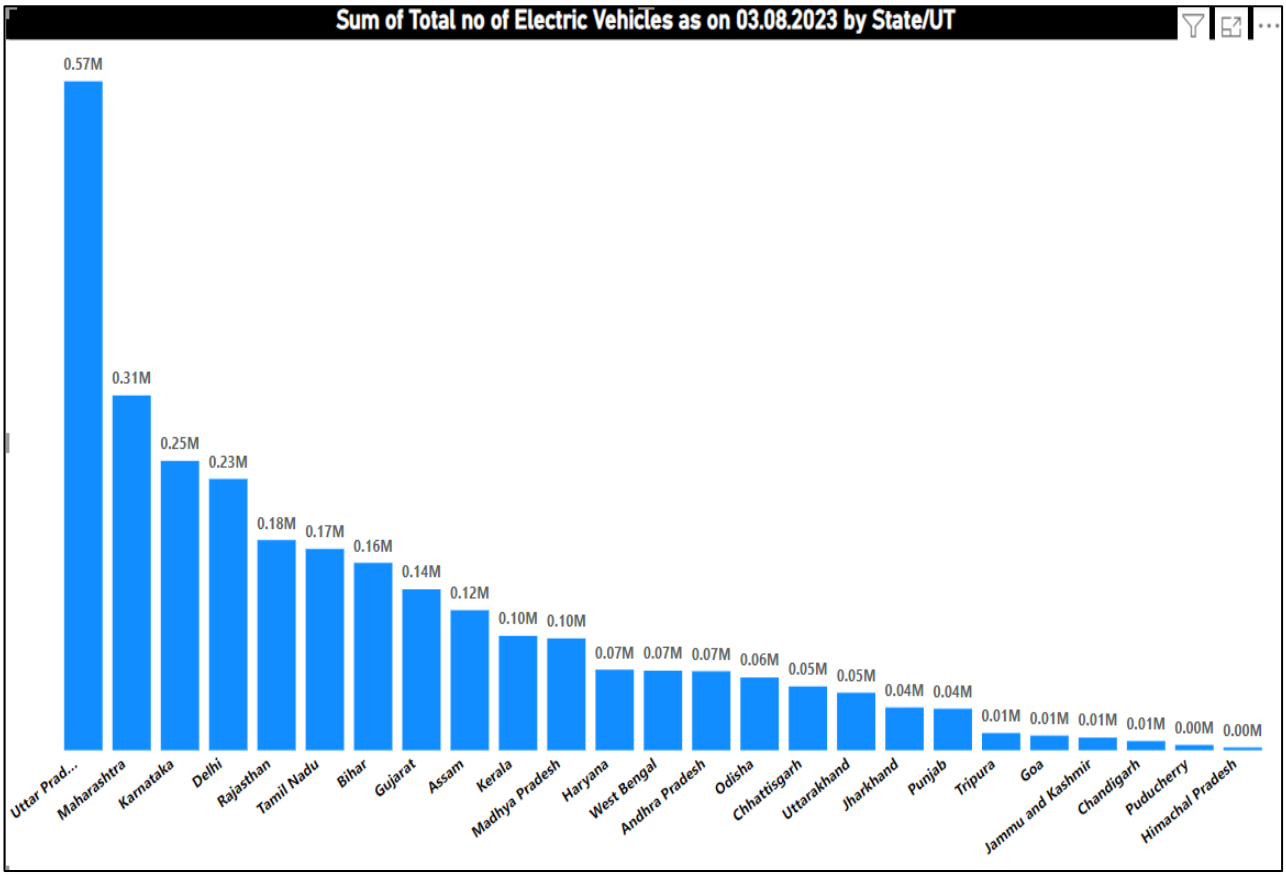


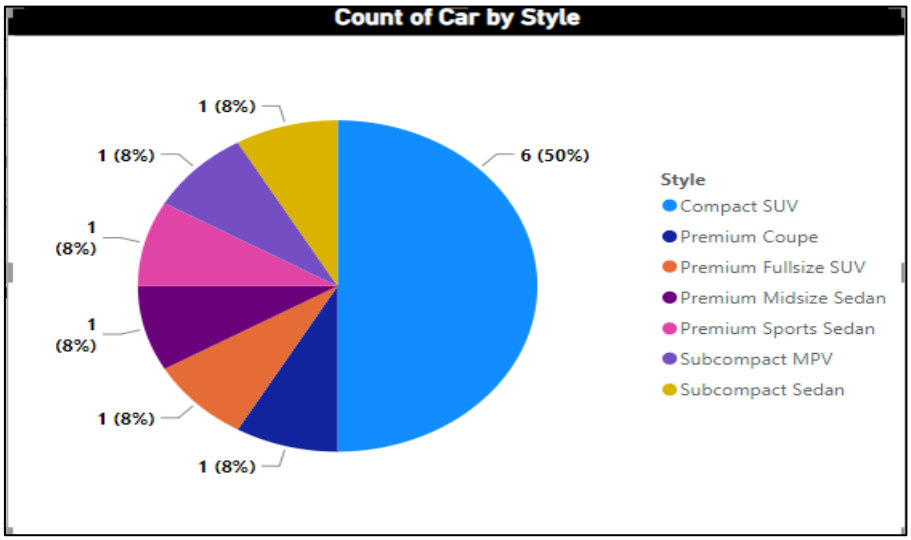

**By Vehicle Type Analysis**

By vehicle type market is classified into passenger cars and commercial vehicles. Passenger cars accounted highest India electric vehicle market share in 2021. It is also dominant in the market and the fastest-growing segment. Passenger cars are in greater demand due to the availability of varied options, comfort, and luxury they provide with clean emissions. Considering the increasing trend of buying passengers EVS. Commercial vehicles also do a prominent during 2022-2029.

For instance, in August 2022, Tata Motors, India's leading automotive manufacturer, joined with the State Bank of India to offer (e-DFS) Electronic Dealer Finance solutions to its authorized passenger EV dealers. This contract would go a long way promoting EV culture and adopting EV's in India. It will be part of the country's national electric mobility mission plan.

# Visualization




| Car | TopModel | PriceRange | Range |
|---|---|---|---|
| Audi E-Tron | na | ₹ 1.01 - 1.19 Cr | 400 Km/Full Charge |
| Audi E-Tron GT | na | ₹ 1.8 Cr | 388 Km/Full Charge |
| BMW iX | na | ₹ 1.16 Cr | 425 Km/Full Charge |
| BYD E6 | na | ₹ 29.15 L | 415 Km/Full Charge |
| Hyundai Kona Electric | HSE | ₹ 23.79 - 23.98 L | 452 Km/Full Charge |
| Jaguar I-Pace | Sportback 55 | ₹ 1.06 - 1.12 Cr | 470 Km/Full Charge |
| Mercedes-Benz EQC | na | ₹ 1 Cr | 471 Km/Full Charge |
| MG ZS EV | Exclusive | ₹ 21.99 - 25.88 L | 419 Km/Full Charge |
| Porsche Taycan | na | ₹ 1.5 Cr | na |
| Tata Nexon EV | Dark XZ Plus LUX | ₹ 13.99 - 17.4 L | 312 Km/Full Charge |
| Tata Nexon EV Max | XZ Plus Lux 7.2 kW | ₹ 17.74 - 19.24 L | 437 Km/Full Charge |
| Tata Tigor EV | XZ Plus Dual Tone | ₹ 12.49 - 13.64 L | 306 Km/Full Charge |

## Conclusion

India's electric vehicle (EV) market is poised for significant growth and transformation. With increasing environmental awareness, government initiatives, and technological advancements, the EV market has gained momentum in recent years. The introduction of various incentives, subsidies, and policies, such as the Faster Adoption and Manufacturing of Electric Vehicles (FAME) scheme, has encouraged both manufacturers and consumers to embrace electric mobility.

Despite facing challenges such as high initial costs, limited charging infrastructure, and consumer skepticism, the EV market in India has shown resilience and promise. The shift towards electric mobility is not only driven by environmental concerns but also by economic factors, including reduced operating costs and energy independence.

Looking ahead, the EV market in India is expected to witness exponential growth, driven by advancements in battery technology, declining battery costs, and the launch of new EV models across different segments. Collaborations between government bodies, industry stakeholders, and technology providers will be crucial in addressing infrastructure gaps, promoting indigenous manufacturing, and fostering innovation in the EV ecosystem.

As India strives towards achieving its ambitious targets for electrification and reducing carbon emissions, the EV market presents a transformative opportunity to revolutionize the transportation sector, create jobs, and contribute to sustainable development. By leveraging its strengths in manufacturing, innovation, and entrepreneurship, India has the potential to emerge as a global leader in the electric mobility revolution.