

# Electric Cars Sales to Surge, Set to Cross 7% Market Share by FY28

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## Synopsis

- Electric car sales penetration is expected to rise rapidly and cross 7% by FY28, subject to timely resolution of rare earth element (REE) disruption, backed by new model launches and government push for improving the charging infrastructure in the country.
- Charging infrastructure is scaling rapidly, with public EV stations growing over 5x from FY22 to early FY25, led by strong government and state-level initiatives.
- Battery localisation under the Production linked Incentive Scheme with duty exemptions on key minerals is expected to reduce import dependency by up to 20% by FY27, significantly lowering EV ownership costs.
- The government has also exempted Basic Customs Duty on lithium-ion battery components, a critical move to support domestic manufacturing and reduce the cost of EV batteries—one of the most expensive components in an electric car.
- Automakers are launching higher-range EV models (up to 489 km) and investing in private and public charging networks, signalling long-term commitment to electric mobility.

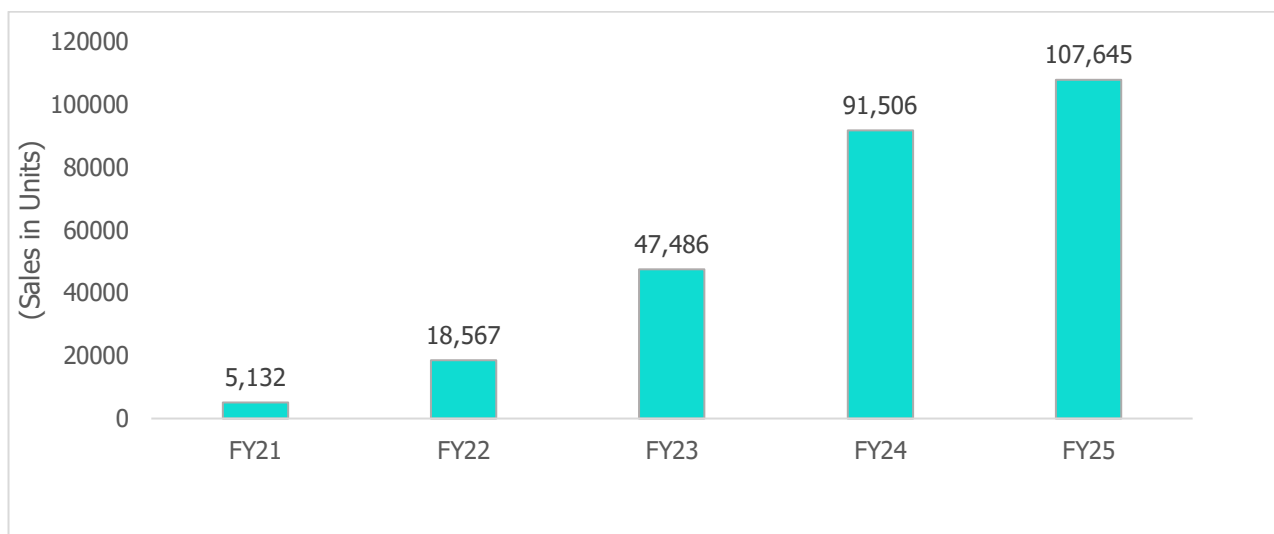
## Electric car sales to rise

Automobile industry is on the cusp of transformation with electric mobility to be the next wave of transformation. With growing concerns over global warming, transportation sector to lead the charge with vehicle being one of the largest contributors to greenhouse gas emissions. The Indian government have also set an ambitious target of EV penetration of 30% by FY30 and hence taking various initiatives to support the same.

The Indian electric cars ecosystem has shown a significant momentum over the last couple of years. In FY25, a total of 1,00,000 plus electric cars were sold across dealerships nationwide growing at a 80% CAGR over FY22. This growth underscores a gradual but steady shift in consumer acceptance of electric mobility, especially in urban centres. The electric cars penetration rose from 1% to 2.6%, however showing slower adoption compared to 2W (6.1%). The relatively low penetration in electric car segment's suggests barriers such as higher upfront costs, limited model availability, and lack of charging infrastructure.

The steady rise in penetration reflects growing consumer awareness, a widening portfolio of electric car offerings by leading OEMs, and the early impact of supportive government policies and charging infrastructure expansion. A key driver of this transformation is the growing capital expenditure by top automakers, which is being channelled into new product development, EV-specific R&D, and manufacturing capabilities aimed at widening the portfolio of electric vehicles. Indian OEMs are set to launch new models with improved range and charging speeds, signalling continued momentum in EV adoption.

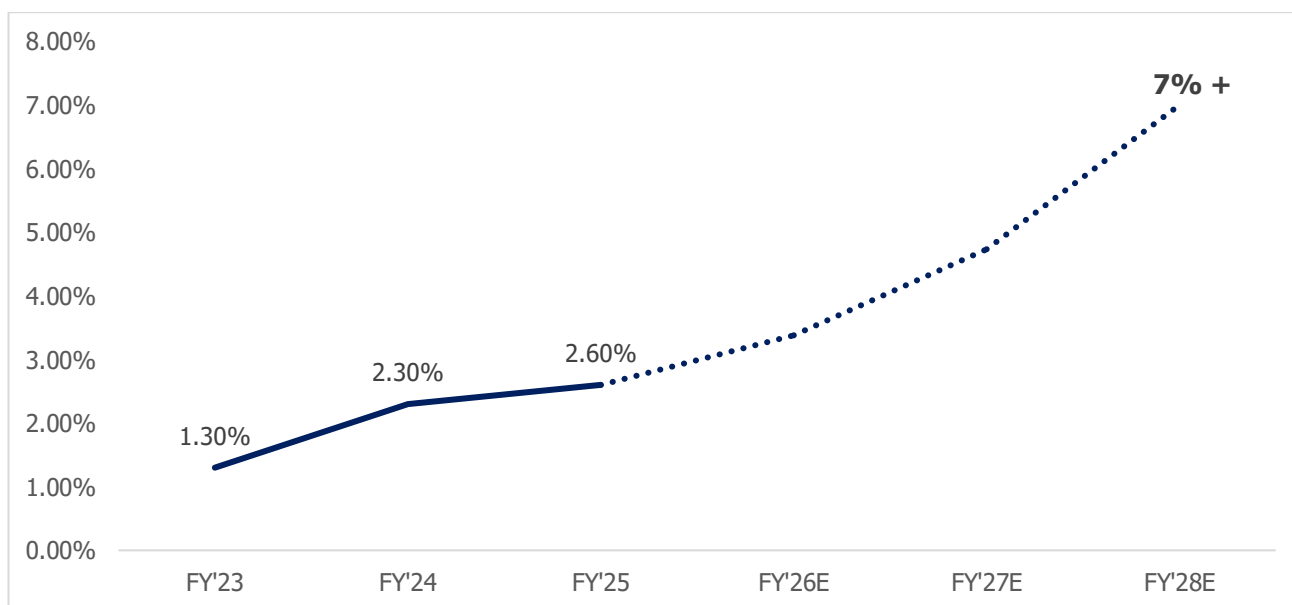
## Chart 1: Electric car sales



Source: FADA, CareEdge Research

Electric car sales in India have shown a strong upward trend over the last five financial years. Total EV sales grew from 1.4 lakh units in FY21 to nearly 19.6 lakh units in FY25, reflecting a compound annual growth rate (CAGR) of 93%. When we look specifically at electric four-wheelers, the growth—while positive—remains relatively modest. Sales increased from just over 5,000 units in FY21 to around 1.07 lakh units in FY25. Despite a nearly 21x increase over five years, four-wheelers still represent a small fraction of overall EV sales, which are largely driven by two- and three-wheelers. This highlights the ongoing challenges in mass adoption of electric cars.

## Chart 2: Electric Cars Penetration



Source: CareEdge Research

India's overall EV penetration rose from 6.38% in FY'23 to 7.8% in FY'25, indicating a moderate but consistent growth in EV adoption across all vehicle segments. This growth reflects expansion of charging infrastructure, particularly in the 2W and 3W segments, the EV penetration in the electric cars segment rose from 2.3% to 2.6%, a

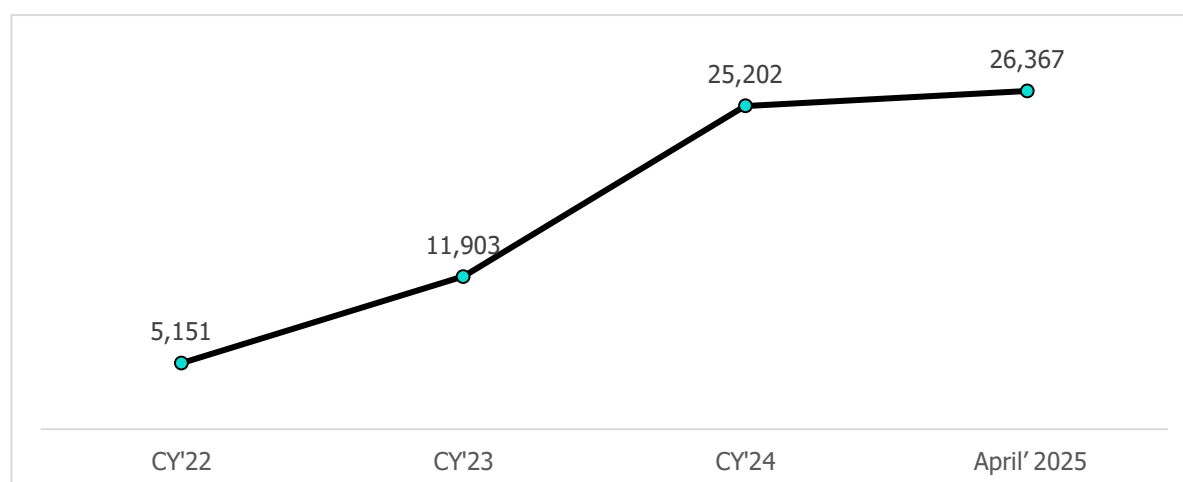
30-bps increase, showing slower adoption compared to 2W (6.1%) and especially 3W (57.3%). The electric cars segment's relatively low penetration suggests barriers such as higher upfront costs, limited model availability, and charging anxiety for personal car buyers.

The automakers are increasingly shifting their focus towards electric mobility by broadening their product portfolios, enhancing charging infrastructure, and lowering ownership costs, electric vehicle (EV) penetration in the passenger car segment is expected to exceed 7% by FY28. To accelerate EV penetration from 2.6% to the currently projected 7%+, leading original equipment manufacturers (OEMs) such as Tata Motors, Mahindra & Mahindra, Hyundai, Maruti Suzuki, along with global players like BYD and MG Motor, are expanding their EV offerings beyond niche premium models. This includes introducing compact and mid-range electric cars priced competitively around the Rs. 8–12 lakh bracket—where a large chunk of India's car sales resides.

### Charging Infrastructure pacing up

Underdeveloped charging infrastructure has long been a bottleneck for EV adoption in India. But government-led initiatives like FAME III, PLI schemes, and public-private partnerships are now improving coverage, especially in metros and along highways. Standardisation guidelines and installation push in residential and commercial spaces are helping ease range anxiety. While progress is still gradual, the ecosystem is steadily aligning to support future EV growth.

### Chart 3: Public EV Charging Stations

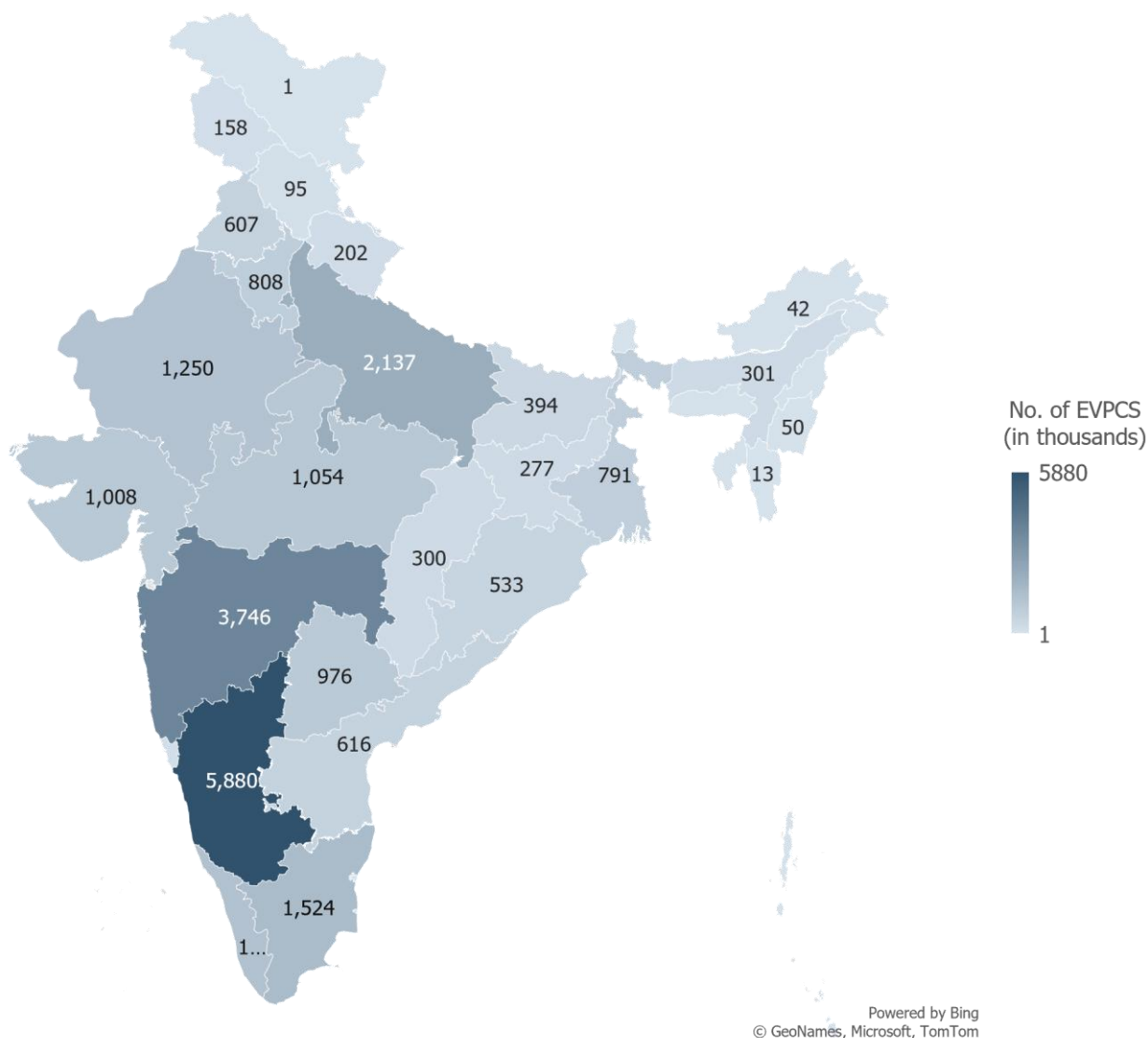


Source: PIB, CareEdge Research

The Indian government has significantly ramped up efforts to build public charging infrastructure. The number of Public EV Charging Stations (EVPCS) has increased from just 5,151 in CY22 to 11,903 in CY23, and further to 25,202 by the end of FY24, reaching 26,367 in early FY25. This represents a compound annual growth rate (CAGR) of approximately 72% over the three-year period (FY22–FY25), highlighting the government's strong commitment to enabling EV adoption. Various state-level EV policies are also playing a critical role in mobilizing public and private investment in this space. However, the expansion of public charging infrastructure has not matched the pace of vehicle adoption. With only 26,367 public EV charging stations available, India currently has around one charger for every 235 EVs on the road. In comparison, leading global EV markets such as China and Europe maintain a

significantly denser network, with one charger for every 7 to 15 EVs, offering greater convenience and reliability to users.

**Figure 1: State / UT wise installed EV Public Charging Stations for FY25**



Source: CareEdge Research

India is witnessing a remarkable transformation in its electric vehicle (EV) ecosystem, as evidenced by the growing number of public charging stations across the country. The latest state-wise data showcases how India is rapidly building the backbone of its EV infrastructure. The state-wise distribution of Electric Vehicle Public Charging Stations (EVPCS) across India highlights the rapid strides being made in EV infrastructure development, a critical enabler for mass EV adoption. With over 26,000 public EV charging stations already installed across India, the foundation is being laid for a robust EV ecosystem.

**Table 1: States with highest Public Charging Station**

State	Charging Stations (Dec'21)	Charging Stations (Apr'25)	CAGR	Electric Car Sales Penetration (FY25)	Key Strategies & Policy Support
Karnataka	172	5880	142%	5%	Early mover with aggressive EV policy. Offers 100% exemption on road tax/registration, Rs. 10 lakh capital subsidies for fast chargers, and strong PPP model for infra. Bengaluru's tech ecosystem fuelled private EV infra growth. Clean Mobility Policy 2025–30 targets Rs. 500B investments, 2,500+ public charging stations.
Maharashtra	317	3746	85%	5%	Focused on pilot cities (Mumbai, Pune, Nagpur), strong PPP promotion, highway & government office charging mandates. EV Policy 2025 includes Rs. 1,995 crore incentives, up to Rs. 20L bus subsidy, toll waivers, and chargers every 25 km.
Uttar Pradesh	207	2137	79%	3%	Leveraged FAME-II central funds: prioritized cities like Lucknow, Kanpur, Varanasi. Policy includes SGST reimbursements, VGF for infra, 300+ new chargers in 16 cities, 1,000 fast chargers by 2025, and major electric bus deployment.
Delhi	72	1951	128%	3%	Aggressive EV policy with doorstep charger installation scheme, Delhi EV Cell for policy execution, scrappage incentives, and 25% upfront purchase subsidy. Mandates EV readiness in new real estate projects.
Tamil Nadu	281	1524	53%	3%	Focus on manufacturing ecosystem. Offers capital subsidies, electricity tariff waivers, and special incentives in EV parks. Policy aims for 1.5 lakh new jobs and localized cell manufacturing to boost ecosystem. Plans for 1,500+ new chargers by FY28.

Source: PIB, Vahaan Dashboard CareEdge Research

Note: Pure EV Vehicles are considered for calculating EV penetration

**Range worry blocks EVs, fixes coming**

Range anxiety the fear that an EV will not have enough charge to reach its destination remains a dominant concern for potential buyers. However, this challenge is rapidly being addressed through a wave of upcoming electric vehicle (EV) launches that promise significantly improved driving ranges and a broader selection for consumers. Indian and global OEMs alike are now focused on expanding their EV portfolios across price points and body styles, making the segment more inclusive and attractive.

This diversification in offerings from affordable hatchbacks to premium crossovers is expected to be a game-changer for the electric car ecosystem. With consumers gaining access to a wider selection tailored to their driving needs, budgets, and lifestyle preferences, the adoption curve is expected to steepen significantly. In essence, while range anxiety was once a major challenge, the future line-up of high-range, feature-rich, and competitively priced EVs is well-positioned to convert intent into purchase, thus accelerating penetration in the passenger vehicle segment well beyond the current 2.6%.

Leading industry players are proactively addressing range anxiety and charging infrastructure concerns ahead of launching their electric four-wheeler (E4W) offerings. A top automaker has unveiled plans to provide smart home chargers with installation support, enhancing convenience for users. It is also developing a fast-charging network across the top 100 cities, aiming for a charger every 5 to 10 kilometres. These early investments reflect a long-term commitment to a robust EV ecosystem, strengthening consumer confidence and making EV ownership more accessible.

### **Localisation to lower battery costs, aid EV push**

Battery Packs constitute 35–45% of the cost of an electric vehicle, and their price is a crucial determinant of overall vehicle affordability. Presently, most battery cells used in Indian EVs are imported, primarily from countries such as China, South Korea, and Japan. This reliance on imports has constrained domestic price competitiveness. Currently, India imports almost its entire requirement of Li-ion batteries. However, CareEdge expects India's import dependency to decline to ~20% by FY27, despite significant growth in demand due to largescale integrated capacities being built for Li-ion battery storage.

The Indian government continues to offer new incentives for the electric vehicle industry in India to encourage investors. In its budget for fiscal year 2025–26 presented Feb. 1, the government announced that key materials such as cobalt powder, lithium-ion battery waste and scrap, lead, zinc and 12 other critical minerals will be fully exempt from basic customs duty. These materials are essential components used in the manufacturing of electric vehicle batteries, which account approximately 40% of the total cost of an electric car. As localized production scales up, economies of scale and supply chain integration are expected to bring down battery costs in the next three to five years. This, in turn, will substantially reduce the price gap between electric cars and traditional internal combustion engine vehicles, making electric cars a more compelling value proposition.

Despite the higher upfront investment, EVs prove to be a financially wise and sustainable choice, offering significant cost savings over just five years of usage. With policy support, reduced running costs, and growing infrastructure, EVs are poised to become not just environmentally responsible—but also economically superior choices for Indian car buyers soon. While EV demands a higher upfront investment, the savings on fuel and maintenance over a 5-year period can offset this difference, making it cost-competitive or even cheaper in the long run. When combined with tax incentives, reduced registration fees, and rising fuel prices, EVs are becoming increasingly attractive for value-conscious Indian consumers.

### **China's REE curbs hit EV output, quick fix vital**

China has recently placed strict export restrictions on seven rare earth elements (REEs), which are crucial for making high-performance magnets used in electric motors and various automotive systems. India's import dependency on China for rare earth permanent magnet remained as high as 90% during FY24 & FY25. The impact of these

restrictions is expected to ripple across electric, ICE and hybrid vehicles. REEs are essential in various automotive components, including electric motors, battery management systems, catalytic converters, infotainment systems, power steering, brake-by-wire systems, and advanced safety sensors. This move has disrupted global supply chains, especially affecting countries like India that depend heavily on Chinese REE imports. The production of EVs is vulnerable to access to REEs.

### **CareEdge Research's View**

India's electric car ecosystem is at a pivotal juncture, showing strong early momentum backed by policy support, expanding charging infrastructure, and growing consumer awareness. While challenges like high upfront costs, limited charging networks, and reliance on imported components persist, the coordinated efforts of the government and industry players are paving the way for steady progress.

Tanvi Shah, Senior Director & Head, CareEdge Advisory & Research, said, "India's electric car sales penetration is likely to cross 7% by FY28, provided rare earth disruption is resolved in a timely manner. With a robust pipeline of model launches, expanding EV charging infrastructure and battery localisation under the PLI scheme, India is well-positioned to accelerate EV adoption."

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