



## EFFECTIVE MARKETING ENTREPRENEUR HYBRID AND ELECTRIC VEHICLES IN INDIA

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### ABSTRACT

This paper is presented India is accelerating electric vehicle (EV) adoption through the 11,500 crore FAME-II scheme (ending March 2024), shifting toward the PM E-DRIVE scheme and 25,938 crore PLI for Automobile/Auto Component industry. These initiatives focus on demand incentives for 2W/3W/e-buses, localizing manufacturing (50% DVA), and supporting 50 GWh of Advanced Chemistry Cell (ACC) battery storage India's electric vehicle (EV) sector is experiencing rapid growth, fuelled by government incentives, rising environmental concerns, and technological advancements. With initiatives like the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) scheme, India aims to significantly increase EV adoption, revolutionizing its transportation landscape towards sustainability and innovation. The country has set an ambitious target to elevate EV sales to 30% of private cars, 70% of commercial vehicles, 40% of buses, and 80% of two- and three-wheelers by 2030, translating to approximately 80 million EVs on Indian roads, alongside a focus on complete domestic EV production through the 'Make in India' initiative. Globally, the electric vehicle market was valued at US\$ 755 billion in 2024 and is forecasted to reach US\$ 4,360 billion by 2033, growing at a CAGR of 21.5% from 2025-33. The Indian EV market, valued at US\$ 2.36 billion in 2024, is projected to grow to US\$ 164.42 billion by 2033, registering a remarkable CAGR of 57.23%, while the Indian EV battery market is expected to expand from US\$ 2.22 billion in 2024 to US\$ 13.89 billion by 2033 at a CAGR of 22.6%. As of Q2 FY26, India's EV sales reached 5,80,664 units, representing 9.98% penetration of total automotive sales with 2W and 3W making up nearly 90% of EV volumes, e-goods carriers posting the highest YoY growth of 158.92%, and EV penetration rising across 2W, 3W passenger and 4W segments QoQ. In October 2025, electric car sales surged to 17,783 units, 56% jump from 11,444 units a year ago and a 9% MoM growth. The overall passenger vehicle market saw record dispatches of over 5,00,000 units in October 2025. On the infrastructure side, India's public EV charging network is expanding rapidly. As of February 2024, there were 12,146 operational charging stations nationwide, with Maharashtra leading, followed by Delhi and other states. A Confederation of Indian Industry (CII) report highlighted the need for at least 1.32 million charging stations by 2030 to support EV growth, requiring over 4,00,000 installations annually. Major industry players are actively enhancing charging infrastructure, with Hyundai Motor India expanding its ultra-fast network with 11 new stations in key cities such as Mumbai, Pune, Ahmedabad, Hyderabad, Gurugram, and Bangalore, as well as along major highways. State-specific targets complement national efforts: Maharashtra aims for 10% EV share in all new vehicle registrations by December 2025, while Karnataka plans to electrify 100% of its three- and four-wheeler cargo vehicles by December 2030.

**KEYWORDS :** Profitable Electric Vehicle Business Ideas in India

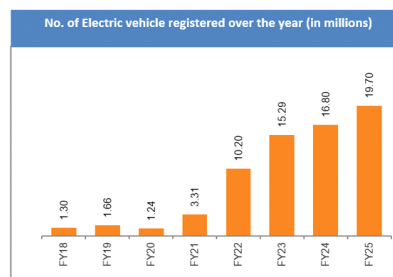
### INTRODUCTION

A recent survey highlights strong interest among Indian consumers in new energy vehicles (NEVs), with 83% of respondents indicating their readiness to choose NEVs exclusively for future purchases by the end of this decade. Reflecting this growing demand, India's public EV charging network has expanded rapidly at a CAGR of about 72% between FY22 and FY25, increasing from around 5,151 chargers in CY22 to 11,903 in CY23, doubling to 25,202 by the end of FY24, and reaching 29,277 as of July FY25—a five-fold increase over the period. This growth has been supported by government initiatives such as the PM E-DRIVE scheme, which allocated Rs. 2,000 crores (US\$ 227.20 million) specifically for the installation of public EV charging stations nationwide.

State-level leadership in charging infrastructure is evident, with Karnataka leading as of July 2025, hosting approximately 6,097 public charging stations, surpassing Maharashtra, driven by early EV policy adoption and a strong push for fleet electrification. Reflecting the growing adoption of electric vehicles, passenger EV sales surged 75% YoY in Q1 FY26, raising market penetration to 3.5% from 2% a year earlier. Kerala led with 7.9% penetration, followed by Delhi, Karnataka, Maharashtra, and Tamil Nadu, driven by rising consumer demand and policy incentives. Electric car sales in August 2025 surged to 17,298 units, marking a 155% year-on-year rise from 6,787 units in August 2024.

The automobile sector has also attracted significant foreign investment, receiving a cumulative equity FDI inflow of approximately Rs. 2,59,753 crores (US\$ 39.15 billion) between April 2000 and June 2025. Looking ahead, India's EV finance

industry is expected to grow substantially, with NITI Aayog and the Rocky Mountain Institute (RMI) projecting it to reach Rs. 3.7 lakh crore (US\$ 50 billion) by 2030.



Source: PIB

### Marketing Objectives:

- To understand the current market landscape of Electric vehicles in India.
- To examine the various marketing opportunities for entrepreneurship in Indian EV sector.
- To identified the challenges for EV entrepreneurs in India.
- To identify the various government policies and initiatives for promoting EV sector in India.

Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme Phase-II is being implemented by the Ministry of Heavy Industries for a period of five years commencing from 1st April,2019 with a total budgetary support of Rs. 10,000 crore. This phase mainly focuses on supporting electrification of public & shared transportation, and aims to support through demand incentive 7090 eBuses, 5 lakh e-3 Wheelers, 55000 e-4 Wheeler

Passenger Cars and 10 lakh e-2 Wheelers. In addition, creation of charging infrastructure is also supported under the Scheme.

The details of electric vehicles (EVs) sold under FAME India Scheme Phase-II are as under as on 21.07.2023:

Sl. No.	Wheeler Type	Registered & Revalidated Models	Registered OEMs	Total No. of Vehicle sold under FAME-II as on 21.07.2023
1	2-wheeler	45	25	7,40,722
2	3-wheeler	96	28	83,420
3	4-wheeler	34	3	8,982
Total		175	56	8,32,824

Source: <http://fame2.heavyindustries.gov.in/dashboard.aspx>

The Ministry of Heavy Industries had sanctioned 520 Charging Stations/ Infrastructure under the Phase-I of FAME India Scheme. Further, this Ministry has also sanctioned 2,877 Electric Vehicle Charging Stations in 68 cities across 25 States/UTs and 1576 charging stations across 9 Expressways and 16 Highways under Phase II of FAME India Scheme.

The Ministry of Heavy Industries has also sanctioned Rs. 800 Cr. as capital subsidy to the three Oil Marketing Companies (OMCs) of the Ministry of Petroleum and Natural Gas (MoPNG) for establishment of 7,432 electric vehicle public charging stations.

The Government of India has taken following steps to give incentives/ subsidies on electric vehicles:

India's road to electrification is finally hitting top gear. From bustling metros to tier-II towns, consumers and enterprises alike are embracing cleaner mobility. Government incentives, plummeting battery prices, and rising fuel costs have created a once-in-a-generation window for entrepreneurs to cash in on electric vehicle marketing ideas.

If you have ever dreamt of building a sustainable, future-proof company, now is the time to plug in. Among all these opportunities, starting a public or fleet-focused EV charging station stands out as one of the most lucrative and impactful business ideas. As the nation's EV adoption grows, reliable charging infrastructure has become a critical need creating space for new-age charging solutions, software platforms, and related services to thrive.

**Indian Market Growth**

Market analysts expect India's EV segment to achieve a 49% compound annual growth rate through 2030. Industry studies project that nearly 45% of new cars sold globally and up to 30% in India could be electric by the end of the decade.

**Government Incentives**

Central and state policies such as FAME-II subsidies, PLI schemes for ACC battery storage, reduced GST (5% on EVs vs. 28% on ICE vehicles), and tax benefits on EV loans have lowered entry barriers for both consumers and entrepreneurs.

**Infrastructure Gap**

Despite progress, India has roughly one public charger for every 135 EVs—an enormous gap compared with China or Europe. This void creates fertile ground for charging, maintenance, and battery-related ventures.

**Urban Mobility Challenges**

Congestion, last-mile delivery demand, and pollution caps are forcing cities to adopt e-mobility solutions fast, opening doors for fleets, rentals, and software platforms.

**Tech Talent & Manufacturing Base**

India boasts robust electronics manufacturing ecosystem and a deep pool of software engineers—key ingredients for scalable, cost-effective EV innovation.

**Profitable Electric Vehicle Business Ideas You Can Start Today**



**Smart Charging Network & Software Platform**

A key foundation for India's EV revolution is robust, tech-enabled charging infrastructure. Platforms like Pulse Energy provide end-to-end software for charging station owners dynamic load balancing, automated billing, remote diagnostics, and white-label mobile apps. These platforms help landlords, fuel-retail outlets, and fleet operators deploy and manage chargers across multiple states with ease. Cloud-based dashboards centralize data, maximize uptime, and integrate with payment systems for instant settlements. Subscription SaaS and small per-session transaction fees drive recurring revenue.

**Start-up tip:** Consider bundling software with hardware procurement and on-site installation to lock in long-term contracts.

India ranks fifth in the global automotive market but estimates do show that it could rise to a third rank market by 2030 (IBEF, 2022). At present, there are 399 electric vehicle start-ups in India (e-Amrit portal). As part of a national effort to achieve zero carbon emissions by 2070, NITI Aayog, the premier policy thinks tank of India, targets EV sales penetration at 70% for commercial cars, 30% for private cars, 40% for buses and a massive number of 80% in two and three-wheelers by year-end (2030). The character of the Indian EV market is unique, with two-wheelers holding the largest portion. The increasing demand from this segment has brought many domestic manufacturing companies to serve them. The future course of EV sales, however varies between various factors such as rapid growth in charging infrastructures, energy distribution network building up pace, increasing governmental initiatives on electric vehicle adoption etc. States such as Uttar Pradesh, Maharashtra, Karnataka, Rajasthan, Gujarat, Tamil Nadu and Delhi have become key drivers of EV adoption across other regions (IBEF, 2022). This will be in addition to a 30 percent EV market share target set by the current government for 2030.

**REFERENCES**

- "Glossary — Global Warming of 1.5 °C". IPCC. Cambridge University Press. 8 October 2018. Retrieved 4 September 2024.
- Randall, Chris (14 October 2025). "1.6 million NEVs: China records unprecedented electric car sales in September". Electrive. Retrieved 12 November 2025.
- Pamidimukkala, Apurva; Kermanshachi, Sharareh; Rosenberger, Jay Michael; Hladik, Greg (2023). "Adoption of electric vehicles: A state-of-art review". *Transportation Research Procedia*. 73: 313–320. doi:10.1016/j.trpro.2023.11.923.
- Quiroga, Tony (August 2009). *Driving the Future*. Hachette Filipacchi Media U.S., Inc. p. 52.
- Freeman, Sunny (9 December 2009). "The end of Zenn". *The Globe and Mail*. Toronto. Retrieved 25 May 2022.
- "Global EV Outlook 2023 / Trends in electric light-duty vehicles". International Energy Agency. April 2023. Archived from the original on 12 May 2023.
- "Electric car sales, 2012 – 2024". IEA Data and Statistics. International Energy Agency. Retrieved 27 May 2025.
- Eberle, Dr Ulrich; von Helmolt, Dr Rittmar (2010). "Sustainable transportation based on electric vehicle concepts: a brief overview". *Energy & Environmental Science*. 3 (6): 689. Bibcode:2010EnEnS...3..689E. doi:10.1039/c001674h.
- Balcioglu, Yavuz Selim; Sezen, Bülent; İşler, Ali Ulvi (2 September 2024).

- "Evolving preferences in sustainable transportation: a comparative analysis of consumer segments for electric vehicles across Europe". *Social Responsibility Journal*. 20 (9): 1664–1696. doi:10.1108/SRJ-12-2023-0713.
10. Notter, Dominic A.; Kouravelou, Katerina; Karachalios, Theodoros; Daletou, Maria K.; Haberland, Nara Tudela (3 July 2015). "Life cycle assessment of PEM FC applications: electric mobility and -CHP". *Energy Environ. Sci.* 8 (7): 1969–1985. Bibcode:2015EnEnS...8.1969N. doi:10.1039/C5EE01082A. ISSN 1754-5692.
  11. [www.ibf](http://www.ibf)
  12. [www.nitiayoug and IBEF, 2022, NITI Aayog](http://www.nitiayougandIBEF,2022,NITI%20Ayog)
  13. <http://fame2.heavyindustries.gov.in/dashboard.aspx>