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MAR-APR 2025 | VOLUME 7 | ISSUE 2

India's Roadmap for Electric  
Fleet Transformation and a

## ZERO-EMISSION FUTURE



Featured Interview with

**Uday Narang**

Founder and Chairman

- **Omega Seiki**

*Driving India's EV Transition  
with Innovation and  
Expansion*

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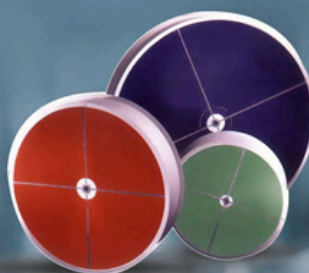


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# BUSINESS NEWS

## “THE ROAD TO A GREENER INDIA IS PAVED WITH BOLD IDEAS, STRONG CAPITAL, AND LOCAL INGENUITY

As India accelerates its EV journey, it's not just catching up—it's gearing up to lead.”



## INVESTMENT ➡

### Ather Energy Converts Compulsorily Convertible Preference Shares Ahead of IPO

Ather Energy approved the conversion of over 1.73 crore Compulsorily Convertible Preference Shares (CCPS) into 24.04 crore fully paid-up equity shares. This move is seen as a preparatory step towards the company's anticipated initial public offering (IPO).

### Kinetic Green Secures \$25 Million to Expand EV Lineup

Kinetic Green announced securing a \$25 million investment from Greater Pacific Capital (GPC). The funds are part of a targeted Series A fundraise of up to \$40 million, aimed at expanding the company's electric vehicle lineup.

### MOOEV Technologies Raises ₹40 Million for Electric Trucking

MOOEV Technologies, an electric vehicle (EV) startup focused on transforming India's heavy-duty transportation sector, has raised ₹40 million in a seed funding round. The round was led by Bizdateup, a prominent startup ecosystem enabler, with participation from key investors like Inflection Point Ventures and Spectrum Impact (Aarti Industries Family Office).

### Pickup Secures \$500K in Seed Funding to Expand Electric Fleet

Pickup raised \$500,000 in seed funding to expand its electric vehicle fleet, strengthen its team, and invest in advanced logistics technology. The company aims to enhance operational efficiency and reduce environmental impact.



### Folks Motors Announces ₹500 Crore Investment to Strengthen India's EV Supply Chain Under PLI Scheme

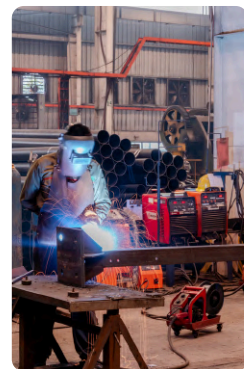
Folks Motors, a leading innovator in the xEV industry, has unveiled an ambitious investment plan of ₹500 crore over the next five years under the Production Linked Incentive (PLI) scheme. The initiative aims to bolster India's EV ecosystem by developing dedicated EV warehousing industrial parks, localizing critical components, and enhancing supply chain efficiencies.

### India's ₹25,938 Crore EV Push: Driving 19 Lakh EVs, Boosting Manufacturing & Advancing Sustainable Mobility

The Parliamentary Consultative Committee of the Ministry of Heavy Industries, chaired by Shri H.D. Kumaraswamy on March 19, 2025, emphasized EV adoption. Key schemes include FAME-II (₹25,938 crore), PM E-DRIVE (₹10,900 crore), and SMEC. With 19 lakh EVs registered in 2024, India aims to boost domestic manufacturing and become a global leader in electric mobility.

### iGowise and Patnaik Energy Group Unveil 5,000 Portable EV Power Banks with \$1M Seed Funding to Revolutionize Urban Charging

In a bold move set to reshape the EV charging landscape, deep-tech mobility startup iGowise has joined forces with Patnaik Energy Group (PEG), a pioneer in Energy-as-a-Service (EaaS) solutions, to launch 5,000 portable power banks designed for electric vehicles, drones, and off-grid operations. Backed by a \$1 million seed funding, the rollout will begin in Hyderabad and Bangalore, with plans to expand across India and into global markets.





# BUSINESS NEWS

## INVESTMENT ➡

### Ather Energy Targets IPO Under ₹3,000 Cr, Opens April 28

Bengaluru-based Ather Energy will launch its IPO from April 28-30, 2025, the first mainboard offering of FY 2025-26. The anchor round opens April 25. As per SEBI filings, the IPO includes a ₹2,626 crore fresh issue, down from ₹3,100 crore proposed earlier, and a reduced offer-for-sale of 1.1 crore shares, halved from the initial 2.2 crore.

### Jitendra EV Bets Big with ₹125 Cr Investment, Eyes 2028 Launch of Hydrogen-Electric Hybrid 'Hydrix'

Jitendra EV, an electric vehicle maker based in Nashik, plans to invest ₹125 crore over five years to enhance R&D, launch new products, and expand manufacturing. ₹80-100 crore is earmarked for innovation, with ₹25 crore for capacity expansion. The company aims to scale its annual output from 60,000 to 96,000 units, supported by newly acquired land for growth.



## ➡ POLICY

### Ministry Of Finance Boosts India's EV Growth With Tax Reforms And Lithium-Ion Battery Manufacturing Incentives

The Ministry of Finance has amended the Income-tax Rules, 1962, to boost India's EV sector by expanding safe harbour rules and including lithium-ion batteries as core auto components. These changes encourage local battery manufacturing, benefiting firms like Tata Chemicals and Exide Industries. EV makers like Ola Electric and Tata Motors may see cost reductions, strengthening India's EV market. The amendments also enhance tax clarity and attract global investments in clean energy.

### Ministry Of Heavy Industries Strengthens EV Manufacturing With New Amendments To PM E-DRIVE Scheme

The Ministry of Heavy Industries has amended the PM E-DRIVE Scheme to boost domestic EV component manufacturing in India. From May 2025, key components like battery packs, VCUs, and traction motors must be locally produced, reducing import dependence. Strict regulations promote self-reliance, job creation, and investment in India's EV sector. The amendments also set phased manufacturing timelines for electric buses, reinforcing India's push for clean transportation and global EV leadership.

### PM E-DRIVE Scheme Rolls Out New Incentives To Accelerate India's Electric Mobility Revolution

The PM E-DRIVE scheme, launched on September 29, 2024, with ₹10,900 crore, promotes EV adoption through e-vouchers, Aadhaar-based authentication, and subsidies for e-ambulances (₹500 crore) and e-trucks (₹500 crore). ₹4,391 crore is allocated for 14,028 e-buses in nine major cities, ₹2,000 crore for charging stations, and ₹780 crore for upgrading testing agencies. Unlike FAME-II, it mandates scrapping certificates for e-truck subsidies and supports cleaner mobility with enhanced transparency, aiming for nationwide EV growth by March 2026.



### Delhi's EV Policy 2.0 Could Phase Out CNG and Diesel Vehicles

Delhi is set to launch EV Policy 2.0, banning new CNG auto registrations from August 15, 2025, and phasing out fossil-fuel two-wheelers by 2026. Goods three-wheelers and public transport must go electric, while municipal garbage fleets target 100% electrification by 2027. Only electric buses will be purchased for city use. The policy, pending cabinet approval, reinforces Delhi's push for sustainable, clean urban mobility.

### Ministry Of Heavy Industries Strengthens EV Manufacturing With New Amendments To PM E-DRIVE Scheme

The Ministry of Heavy Industries has amended the PM E-DRIVE Scheme to boost domestic EV component manufacturing in India. From May 2025, key components like battery packs, VCUs, and traction motors must be locally produced, reducing import dependence. Strict regulations promote self-reliance, job creation, and investment in India's EV sector. The amendments also set phased manufacturing timelines for electric buses, reinforcing India's push for clean transportation and global EV leadership.

### Delhi Launches 76 Electric Buses Under DEVI Initiative to Strengthen Metro Feeder Network

The Delhi government has launched 76 electric buses under the new DEVI (Delhi Electric Vehicle Interchanges) initiative to boost last-mile metro connectivity and promote sustainable urban transport. Starting from Ghazipur depot, these short-route buses will serve underserved areas. Routes include Anand Vihar to Keshav Nagar and Mayur Vihar to Mori Gate. Replacing the Mohalla Bus Service, DEVI aligns with Delhi's EV Policy, FAME India, and NEMMP initiatives.

# BUSINESS NEWS

## → THINK TANK

### India's E-Bus Sector Poised for Rapid Growth, Expected to Hit 15% Market Share by FY27

India's electric bus (e-Bus) sector is growing rapidly, with FY24 sales reaching 3,644 units—an 81% increase. Market penetration is expected to rise from 4% to 15% by FY27. Leading manufacturers like Tata Motors and Olectra are scaling production, supported by policies like FAME and PM e-Bus Sewa. E-Buses offer 15-20% lower total costs over 12 years, driving adoption. Challenges include STU finances and payment security concerns. Experts predict expansion into private and inter-city fleets as battery costs fall, infrastructure improves, and government support strengthens India's clean transport future.

### India's Electric Two-Wheeler Market Sees Slow Growth In February 2025

India's electric two-wheeler market saw slow growth in February 2025, with 15,306 units sold. Ather Energy led with a 24.98% share, followed by Ola Electric (19.53%) and Greaves Electric Mobility (13.24%). Rising fuel prices and sustainability goals drive demand, but market momentum remains slow. Innovations, government incentives, and battery advancements are expected to boost future sales.

### Global Electric Vehicle Market to Reach \$4.3 Trillion by 2033, Driven by Battery Innovations and Policy Shifts

The global EV market is set to grow from \$328.73 billion in 2024 to \$4.30 trillion by 2033 at a 33.1% CAGR, driven by battery advancements and expanding infrastructure. Tesla's in-house battery production may cut EV costs by 50%, while global battery demand is projected to hit 1.5 TWh by 2030. Policy shifts under Trump, including halted EV funding and tariffs, may slow U.S. adoption. China, Europe, and India lead the market, with top players like Tesla, Volkswagen, and BYD. Despite uncertainties, EV demand continues to surge globally.



### Battery Industry Enters New Phase as Demand Soars and Costs Decline, Fueling Growth in EVs and Energy Storage

The global battery industry is rapidly evolving, with 2024 marking a major milestone as battery demand exceeded 1 TWh, fueled by a 25% rise in EV sales to 17 million units. Battery pack prices fell below USD 100/kWh, driven by cheaper minerals and manufacturing efficiencies. Global production capacity is set to triple, shifting the market from regional to global. As battery storage becomes vital for renewable energy integration and grid stability, innovations in long-duration storage and recycling are emerging, reshaping the future of energy and electric mobility.

### India's EV Revolution Accelerates: Over 2 Million Units Sold in FY2025, Marking a Historic High

India's EV market hit a record 2 million sales in FY2025, growing 15.6% YoY, led by electric two-wheelers (60% share). Ola Electric topped with 3.58 lakh units. Cargo e-three-wheelers saw the highest growth at 26%, driven by logistics. Tata Motors led e-cars, while MG and BYD posted strong gains. E-buses declined 3.8%, but Olectra grew 68.56%. Total EVs in India now exceed 6.2 million, showcasing rapid adoption, tech innovation, and a strong policy push for clean mobility.



### India's EV Revolution Accelerates: Over 2 Million Units Sold in FY2025, Marking a Historic High

India's electric vehicle (EV) market hit a record 2 million sales in FY2025, up 15.6% from FY2024, with total EV adoption reaching 6.2 million units—an 11.5x rise since FY2020. Electric two-wheelers led the surge with 1.2 million units sold, followed by strong growth in passenger and cargo three-wheelers. Ola, Tata, and Bajaj dominated across categories. Notably, cargo three-wheelers grew 26% YoY, while electric car sales rose 12%. However, e-bus sales dipped 3.8%. Tata led in e-cars and e-buses despite some decline. With robust policy backing and infrastructure expansion, India's EV ecosystem continues its rapid transformation toward sustainable mobility.

## BATTERY BREAKTHROUGHS AND BOLD POLICIES ARE FUELING THE FUTURE OF TRANSPORT—QUIETLY, CLEANLY, AND QUICKLY.

### Global E-Bike Motors Market Set to Reach USD 74.99 Billion by 2032 Amid Rising Demand for Eco-Friendly Mobility

The global E-Bike Motors Market is set to grow from USD 47.52 billion in 2023 to USD 74.99 billion by 2032 at a 5.2% CAGR. Demand is rising due to eco-friendly commuting, government incentives, and battery advancements. Asia Pacific leads in manufacturing, while Europe and North America see growing adoption. High costs and weak infrastructure remain challenges. Major players like Bosch, Trek, and Yamaha are driving innovation, shaping the future of urban mobility.

### CRISIL Ratings: Rising Competition in Electric Two-Wheeler Industry to Prolong Operating Losses Amid Strong Volume Growth

India's electric two-wheeler (e2W) market is growing rapidly, driven by legacy ICE manufacturers entering the space and expanding their market share from 15% in FY2023 to 45% in FY2025. This heightened competition boosts volume growth but prolongs break-even timelines, especially for pure-play e2W firms, which may need further equity infusion. Despite reduced government subsidies, e2Ws offer a 15-20% lower total cost of ownership than ICE vehicles. Affordable models and falling battery prices have also narrowed upfront cost differences. With price cuts, expanded dealer networks, and PLI support, the industry expects around 25% volume growth in FY2026, amid rising consumer adoption.



# BUSINESS NEWS

## ➔ PARTNERSHIP

### “THE ROAD TO NET-ZERO RUNS ON ELECTRIC WHEELS—AND THE WORLD IS SHIFTING GEARS FAST.”



#### **Ergon Labs and Omega Seiki Pvt. Ltd. Announce Strategic Partnership for Integrated Power Converter in Electric Three-Wheelers**

Ergon Labs, an emerging innovator in light EV powertrain technologies, has announced a strategic partnership with Omega Seiki Pvt. Ltd. (OSPL), one of India's fastest-growing electric vehicle manufacturers. As part of the collaboration, OSPL will be the first OEM to integrate Ergon's Integrated Power Converter (IPC) technology into its electric three-wheeler lineup, beginning with the L5 segment.

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#### **iGowise Mobility Expands Globally with Strategic EV Partnerships; Aims to Boost India's Tech Exports**

iGowise Mobility (iGo) has announced a series of global partnerships to expand its footprint in the UK, Switzerland, and South America, reinforcing its commitment to the “Made in India, Made for the World” vision. By collaborating with leading international fleet operators—including EVMI Solutions (UK), Subeez (Switzerland), and Yaanco SAS (Colombia)—iGo aims to revolutionize the electric trike segment while tripling India's automotive and technology exports by 2035.

#### **TVS Motor and PETRONAS Strengthen Partnership to Boost Indian Motorsport with Extended Title Sponsorship**

TVS Motor Company (TVSM) has strengthened its partnership with PETRONAS Lubricants International (PLI) to further enhance the Indian motorsport scene. As part of this expanded collaboration, PLI will continue as the title sponsor of TVS Racing—the country's first factory racing team—for the next three years.

#### **Greaves Electric Mobility Partners with Indofast Energy to Revolutionize Last-Mile Transportation**

Greaves Electric Mobility Limited (GEML), the electric mobility arm of Greaves Cotton Limited (GCL), has announced a strategic partnership with Indofast Energy, a joint venture between Indian Oil and SUN Mobility, to enhance last-mile transportation solutions for B2B fleets and ride-sharing services. As part of this collaboration, the companies have unveiled the Ampere ‘Magnus SW.S’, an advanced electric scooter integrated with Indofast Energy's battery-swapping technology.



#### **TVS Motor and PETRONAS Strengthen Partnership to Boost Indian Motorsport, Support TVS Racing's Continued Success**

TVS Motor Company has extended its partnership with PETRONAS Lubricants International, naming PLI the title sponsor of TVS Racing for the next three years. The collaboration supports TVS Racing's participation in key Indian motorsport events, reinforcing both companies' commitment to advancing motorsports in India and boosting PLI's footprint in the high-performance lubricants market.

#### **Hala Mobility And iGowise Partner To Deploy 2,000 Electric Trikes for Last-Mile Delivery**

Hala Mobility has partnered with iGowise Mobility, a mobility tech startup specializing in high-speed light electric vehicles (LEVs). As part of this collaboration, iGowise will provide 2,000 high-speed, anti-topple electric trikes to cities like Hyderabad and Bangalore. These vehicles aim to solve inefficiencies in last-mile delivery by offering businesses lower operational costs, greater reliability, and compliance with sustainability mandates while ensuring faster deliveries for consumers.



#### **JBM Electric Vehicles Collaborates with Hitachi ZeroCarbon for Next-Gen Battery Management in EV Buses**

In a significant leap toward cleaner and more efficient public transportation, JBM Electric Vehicles, a leading player in the global EV ecosystem and a wholly owned subsidiary of JBM Auto Ltd., has announced a strategic partnership with Hitachi ZeroCarbon. The collaboration aims to integrate Hitachi's state-of-the-art ZeroCarbon BatteryManager into JBM's electric bus fleet.





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# India's Roadmap for Electric Fleet Transformation and a EMISSION FUTURE



India's electric vehicle (EV) revolution is gaining remarkable momentum, with several business leaders driving the change that is transforming the country's transportation landscape. As the world moves towards sustainability, electric mobility is seen as a key component in India's efforts to reduce carbon emissions and improve air quality. Business leaders in India are seizing the opportunity to lead this transformation, positioning themselves at the forefront of this critical movement.

India's push for electric mobility is backed by ambitious government initiatives aimed at promoting clean energy solutions and reducing reliance on fossil fuels. The Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) scheme is one such initiative, offering incentives for both consumers and manufacturers to encourage the adoption of EVs. As India strives to become a global leader in renewable energy, the role of EVs in this strategy is paramount, providing a cleaner alternative to traditional gasoline and diesel-powered vehicles.

Leading the charge in the EV space are companies such as Tata Motors, Mahindra Electric, and Ola Electric, with their innovative solutions making electric mobility more accessible and appealing to the masses. Tata Motors, with its wide range of electric cars, has been a major player in the EV market. Their commitment to sustainability has helped make electric cars more affordable, catering to the needs of everyday consumers. Mahindra Electric, a subsidiary of the Mahindra Group, is another pioneer in the EV sector, focusing on electric commercial vehicles. Their leadership in electric three-wheelers has been instrumental in driving adoption in urban and rural areas alike.

Ola Electric, the latest disruptor in the Indian EV market, has quickly gained attention for its electric scooters, combining cutting-edge

technology with modern design. Their impressive sales figures and the rapid expansion of EV charging infrastructure have shown how quickly the electric vehicle ecosystem can evolve when driven by strong leadership and innovation. By offering affordable EVs and providing the necessary infrastructure for widespread adoption, business leaders like Bhavish Aggarwal, CEO of Ola Electric, are shaping the future of India's electric mobility sector.

In addition to automakers, startups like Ather Energy, Revolt Motors, and Simple Energy are making significant strides in the electric two-wheeler segment, tapping into the growing demand for sustainable and cost-effective transportation options. These companies are reshaping consumer behavior, showing that EVs can be just as stylish, affordable, and convenient as their conventional counterparts. The growing awareness of climate change and the need for green solutions has created a ripe environment for EV startups to flourish.

Business leaders are not only focusing on the vehicles themselves but are also heavily involved in the development of supporting infrastructure. The expansion of EV charging stations, battery-swapping technology, and renewable energy-powered charging solutions is crucial for ensuring that EV adoption reaches its full potential. Companies such as Reliance and Adani are also entering the space, providing solutions for charging infrastructure, which is essential for widespread adoption across urban and rural areas.

The future of India's EV market looks bright, with business leaders at the forefront of driving the country's transition towards clean and sustainable transportation. Their efforts in manufacturing, infrastructure development, and public awareness are ensuring that India's electric mobility revolution is not only on track but poised to become a global success story.

# The Economic Potential Of Smart Electric Fleets For Indian Logistics And Delivery Services

India's logistics and delivery sector is growing rapidly, driven by e-commerce expansion and urbanization. However, traditional fuel-based transportation faces rising fuel costs, high operational expenses, and environmental concerns. Smart electric fleets are emerging as a game-changer, offering economic and environmental benefits that can reshape India's logistics and delivery industry.

India has set ambitious targets for electric mobility, aiming for 30% of all vehicles to be electric by 2030. The logistics and last-mile delivery sector plays a crucial role in this transition. Electric two-wheelers and three-wheelers are already making an impact, with companies like Zomato, Swiggy, Amazon, and Flipkart adopting electric vehicles (EVs) to reduce costs and meet sustainability goals. The operating cost of an electric vehicle is significantly lower than a fuel-based vehicle. While petrol and diesel costs fluctuate, electricity is comparatively stable and more affordable. EVs require fewer moving parts, reducing maintenance expenses by up to 40%. Fleet operators can achieve major savings by switching to electric vehicles, especially for last-mile deliveries, where frequent stops and short distances make EVs ideal.

Government policies and incentives are making electric fleets more attractive. The Faster Adoption and Manufacturing of Electric Vehicles (FAME II) scheme provides subsidies for electric two-wheelers, three-wheelers, and four-wheelers used in commercial transport. State governments are also offering incentives, including tax exemptions and charging infrastructure support. Additionally, battery-swapping policies are being implemented to address range anxiety and ensure seamless fleet operations. These initiatives make the transition to electric fleets financially viable for logistics operators.

Another key economic advantage is the long-term savings from reduced fuel dependence. India imports a large share of its fuel, and shifting to electric fleets can cut down fuel import bills. In urban areas, where delivery services are expanding rapidly, electric fleets help reduce congestion and pollution. Cities like Delhi, Mumbai, and Bengaluru are introducing stricter emission norms, encouraging businesses to adopt EVs for sustainable operations.

The integration of smart technology further enhances the efficiency of electric fleets. AI-powered fleet management systems optimize routes, monitor battery performance, and track vehicle health in real time. Companies can analyze data to reduce idle time, maximize deliveries, and ensure cost-effective fleet utilization. Smart charging solutions, including fast chargers and battery-swapping stations, are making electric fleets more practical.

Challenges remain in the widespread adoption of electric fleets, such as the high upfront cost of EVs, limited charging infrastructure, and concerns over battery life. However, financing options, leasing models, and advancements in battery technology are addressing these issues. Companies are investing in localized charging hubs and renewable energy-powered charging stations to overcome these hurdles.

The shift to smart electric fleets presents a major economic opportunity for India's logistics and delivery sector. By reducing operating costs, lowering emissions, and improving efficiency, electric fleets can drive sustainable growth. As policies evolve and infrastructure improves, the adoption of EVs in logistics will accelerate, making India a leader in smart, green transportation solutions.





# Future-Ready Fleets: Why Smart Technology is Crucial to India's Electric Mobility Push



India's shift toward electric vehicles (EVs) is accelerating, particularly in sectors like freight transport and public mobility. Electric trucks and buses are no longer experimental, they are operational, and increasingly central to government and business sustainability goals. Yet the transition brings unique operational challenges. For commercial EV fleets, success depends not only on electrification, but also on intelligent systems that can manage complexity at scale.

Heavy-duty EVs operate under tighter constraints than their combustion-engine counterparts. Range limitations, charging downtime, and battery degradation introduce new variables that logistics operators must manage every day. In this evolving ecosystem, smart fleet technology is no longer a luxury, it's a necessity.

Unlike ICE vehicles, electric fleets can't afford inefficient routing. Dynamic route optimization, powered by artificial intelligence, helps fleets navigate real-time traffic, terrain, and weather, while also factoring in battery capacity and charging points. This ensures that deliveries stay on schedule without compromising battery range. For sectors like e-commerce and public transport, where timing is critical, this capability is a game-changer.

A major operational shift in EV adoption is the need for smart energy use. Charging schedules must align with route demands, depot capacity, and grid availability. Platforms that intelligently manage when and where vehicles are charged, often incorporating renewable energy sources, can reduce costs, avoid peak load penalties, and extend battery life. These solutions make it feasible to scale electric fleets without overwhelming infrastructure.

Though EVs generally require less maintenance than conventional vehicles, unexpected issues especially related to batteries or onboard electronics can lead to costly downtime. Predictive maintenance tools, using real-time vehicle diagnostics and usage patterns, enable operators to preempt failures. This reduces disruptions and improves overall asset utilization, which is vital for high-volume commercial operations.

Fleet operators need a live, end-to-end view of their assets. Advanced telematics platforms offer visibility into location, speed, battery health, driver behavior, and vehicle diagnostics. In electric fleets, this data is crucial for decision-making, whether it's rerouting a vehicle, allocating the right asset for a job, or responding quickly to disruptions. This level of responsiveness builds resilience into operations.

Data collected from electric fleets doesn't just serve day-to-day operations, it's also key for long-term planning. Where should charging hubs be built? Which routes offer the best ROI for electrification? What's the true cost per kilometer for an EV versus a diesel truck? Fleet intelligence platforms offer insights that guide network design, capital investments, and sustainability planning with measurable confidence.

India's logistics sector, long constrained by high costs and inefficiencies, is at a tipping point. Electrification offers environmental and regulatory benefits, but without intelligent operational support, many of these gains could be offset. Fleet operators need solutions that are flexible, scalable, and deeply integrated with their daily realities.

The convergence of electric mobility and smart fleet technology represents more than innovation, it's the foundation for future-ready transport. In the years ahead, those who invest in intelligence as much as in infrastructure will not only lead the shift to EVs but redefine what efficiency, sustainability, and profitability look like in Indian logistics.



## Pali Tripathi

CEO  
Taabi Mobility Limited

# How Tier-II And Tier-III Cities Are Emerging As Hotspots For EV Fleets



Tier-II and Tier-III cities in India are rapidly emerging as key markets for electric vehicle (EV) fleet adoption, driven by supportive policies, cost advantages, and a growing demand for sustainable transportation. While metro cities have traditionally led the EV transition, smaller cities are now playing a crucial role in expanding the market, particularly in commercial and shared mobility segments. One of the main factors driving EV fleet adoption in these cities is affordability. The lower cost of living and real estate prices allow fleet operators to set up charging and maintenance infrastructure at a lower cost compared to metropolitan areas. This cost advantage makes it easier for businesses to transition to electric fleets, especially for last-mile delivery and ride-hailing services. Companies operating in e-commerce, logistics, and food delivery are increasingly turning to EVs to reduce operational costs and meet sustainability targets.

Government incentives and regulatory push have also contributed to this shift. The Faster Adoption and Manufacturing of Electric Vehicles (FAME) scheme, along with state-level subsidies, has encouraged fleet operators to consider EVs. Additionally, local governments in several states have introduced policies to promote electric mobility in smaller cities by offering benefits such as tax exemptions, reduced road permit fees, and dedicated EV zones. These measures are making EV adoption more viable and attractive for businesses in Tier-II and Tier-III cities.

Infrastructure development is another key driver. Many smaller cities are witnessing a rise in charging stations, thanks to public-private partnerships and investments from energy companies. As the charging network expands, range anxiety is decreasing, making it easier for fleet operators to integrate EVs into their daily operations. Several state transport corporations are also deploying electric buses in smaller cities, further boosting the adoption of electric mobility.

Consumer awareness and changing preferences are also playing a role in the increasing adoption of EVs in these cities. As people become more conscious of fuel costs and environmental benefits, they are more willing to explore electric options for shared mobility. Ride-hailing platforms, including auto-rickshaw aggregators, have begun shifting to electric vehicles to cater to this demand. The lower maintenance costs and higher efficiency of EVs make them a preferred choice for fleet owners looking for long-term cost savings.

The emergence of local EV manufacturers and startups focusing on affordable electric two-wheelers and three-wheelers is also accelerating the transition. Companies are now designing vehicles specifically for commercial use in smaller cities, with better mileage and durability. This trend is reducing dependence on imports and strengthening India's domestic EV industry.

Despite these positive developments, challenges remain. Charging infrastructure, though expanding, still needs to reach remote areas to ensure seamless operations. Battery costs continue to be a significant factor, although advancements in battery technology and local production are expected to drive prices down. Financing options for fleet operators also need to improve to make EV adoption more accessible.

As Tier-II and Tier-III cities continue to grow, their role in India's EV transition will become even more significant. With increasing investments, policy support, and technological advancements, these cities are set to become major hubs for electric fleet operations, shaping the future of sustainable mobility in India.



# Future-Ready Fleets: The Role of Smart Technology in India's Electric Vehicle Transformation

India is undergoing a significant shift toward sustainable mobility, with electric vehicles (EVs) playing a crucial role in reducing carbon emissions and promoting energy independence. The country's automotive sector, contributing 7.1% of GDP, is transforming rapidly, driven by technological advancements, government policies, and evolving consumer preferences. With India's EV market projected to grow at a 49% CAGR between 2022 and 2030, smart technology will be the key to making this transition seamless and scalable[1].

## The Evolution of India's EV Landscape

India aims to electrify 70% of commercial vehicles and 80% of two-wheelers and three-wheelers by 2030[1]. This transition is not just about reducing emissions but also enhancing energy security and fostering domestic manufacturing under the 'Make in India' initiative. The rise in EV adoption is evident in the surge of 1,69,931 EV unit sales in January 2025, reflecting 19.4% MoM and 17.1% YoY growth. Passenger vehicles and two-wheelers are leading this shift, demonstrating increasing consumer confidence. Local production is a critical element of India's EV push. It will reduce import dependency and strengthen the domestic supply chain. Integrating AI, IoT, and blockchain-driven solutions will further enhance efficiency, making India's EV ecosystem globally competitive.

## Smart Technology: The Backbone of Future EV Fleets

### • Advancements in Battery Technology

Battery innovation is at the heart of EV progress, shaping both performance and affordability. India's EV battery market is projected to expand from \$16.77 billion in 2023 to \$27.70 billion by 2028, driven by advancements in lithium-ion technology, which now offers higher energy density, faster charging, and greater durability. Meanwhile, emerging technologies like solid-state and sodium-ion batteries promise to further enhance efficiency, reduce costs, and improve safety. To accelerate this progress, both Indian and global manufacturers are investing heavily in battery R&D, paving the way for more practical and accessible EV solutions.

### • AI-Powered Fleet Management

Artificial intelligence (AI) and machine learning are revolutionising EV fleet management. AI-driven systems optimise route planning, battery usage, and predictive maintenance, reducing costs and improving efficiency. AI is also driving the development of autonomous electric vehicles (EV-AVs), which could transform urban mobility and logistics. These innovations will enhance not only individual EV ownership but also large-scale fleet operations.

### • Connected Vehicles & IoT Integration

Modern EVs now feature IoT-enabled connectivity, allowing for regenerative braking, remote diagnostics, and Over-the-Air (OTA) software updates. These capabilities ensure self-monitoring, automatic software upgrades, and seamless driving experiences. Enhanced connectivity improves efficiency and reduces the need for frequent servicing, making EVs more reliable and cost-effective.



### • Smart Charging Infrastructure

Ultra-fast charging stations have significantly reduced charging times, making EVs more convenient for daily use. Wireless charging technology is also emerging, eliminating the need for physical cables. Another breakthrough is Vehicle-to-Grid (V2G) technology, which enables EVs to supply excess electricity back to the grid. This helps balance energy demand and promotes a more sustainable power ecosystem.

### • Economic Impact and Job Creation

Beyond environmental benefits, the shift to electric mobility is set to generate approximately 50 million new jobs by 2030. Growth in the EV sector will create employment opportunities in battery manufacturing, software development, charging infrastructure, and AI-driven fleet management. This positions EV adoption as both a technological revolution and an economic growth driver for India.

## Conclusion

India's transition to smart, electric fleets is well underway, driven by policy support, consumer demand, and rapid advancements in technology. As battery innovations, AI-powered fleet management, and smart charging infrastructure continue to evolve, India is poised to become a global leader in electric mobility. The future of transportation in India will not only be electric but also intelligent, connected, and highly efficient, paving the way for a cleaner and more sustainable tomorrow.



**Partik  
Kamdar**

CEO and Co-Founder  
**Neuron Energy**



# PLI Scheme Impact On India's EV Fleet Manufacturing Sector

The Production-Linked Incentive (PLI) scheme has played a transformative role in shaping India's electric vehicle (EV) fleet manufacturing sector. Introduced by the Indian government to boost domestic manufacturing and reduce reliance on imports, the scheme has accelerated investment in EV production, battery technology, and supply chain localization. This initiative aligns with India's vision of becoming a global leader in clean mobility while reducing its carbon footprint.

One of the major impacts of the PLI scheme has been the increased participation of both established and new manufacturers in the EV ecosystem. The scheme provides financial incentives based on incremental production, encouraging companies to scale up manufacturing operations and invest in research and development. As a result, leading automotive companies and startups have committed significant capital toward expanding their EV production capacities, leading to a surge in the domestic supply of electric vehicles for commercial and fleet operations.

The localization of key EV components, particularly battery manufacturing, has been a crucial aspect of the PLI scheme's impact. Battery costs account for nearly 40% of an EV's total cost, and India has traditionally depended on imports for lithium-ion cells. With incentives provided for advanced chemistry cell (ACC) battery production, domestic companies are now setting up gigafactories to reduce import dependence and enhance cost competitiveness. This shift is making EVs more affordable, driving higher adoption among fleet operators seeking long-term cost savings.

The scheme has also helped in job creation and skill development in the EV sector. With increasing investments in manufacturing plants, battery production units, and charging infrastructure, employment opportunities have expanded across various skill levels. Engineers, technicians, and supply chain professionals are finding new career prospects in the growing EV ecosystem, further strengthening India's industrial capabilities.

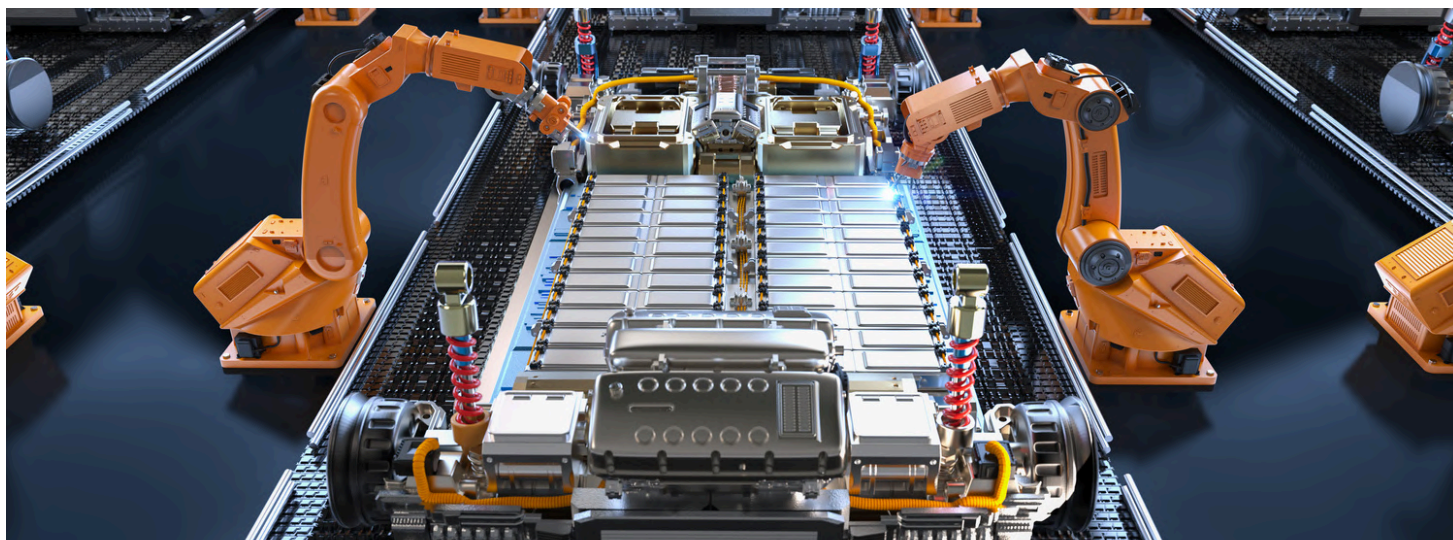
Another significant impact is on the supply chain and ecosystem development. By promoting domestic production of EV components such as electric motors, controllers, and battery packs, the PLI scheme



Another significant impact is on the supply chain and ecosystem development. By promoting domestic production of EV components such as electric motors, controllers, and battery packs, the PLI scheme is reducing India's reliance on foreign imports. This not only enhances supply chain security but also contributes to cost reduction, making electric fleet solutions more viable for businesses. The integration of local suppliers into the value chain ensures steady availability of parts, minimizing disruptions and enhancing the efficiency of EV manufacturing.

The PLI scheme has also spurred innovation in EV technology. Automakers and component manufacturers are now investing more in R&D to develop advanced and efficient EVs suited to India's driving conditions. Fleet operators benefit from improved vehicle range, faster charging capabilities, and better performance, making EVs a practical alternative to traditional fuel-powered fleets. This has led to increased confidence in the EV sector, attracting more investments from domestic and international players.

While the PLI scheme has accelerated growth, challenges remain in scaling production and meeting demand. Infrastructure development, charging network expansion, and raw material availability are key areas that require continuous government support. However, with the momentum generated by the scheme, India's EV fleet manufacturing sector is on a promising path, positioning itself as a hub for sustainable and electric mobility solutions.





# How EVs Are Changing the Way We Ride and Recharge

In the broader journey of electrification, battery technology has quietly but profoundly transformed the electric vehicle (EV) landscape. While motors, drivetrains, and software draw attention, it's the advancement in battery systems — especially the shift toward high-voltage (HV) architecture — that's redefining the future of mobility across both two-wheelers and four-wheelers.

What was once exclusive to high-performance electric cars is now becoming the backbone of innovation in everyday vehicles, including electric motorcycles. This progression is bringing in new levels of efficiency, reduced charging downtime, and improved safety, turning skepticisms into trust — especially in markets like India, where limited infrastructure and range concerns have traditionally hindered adoption.



## The High-Voltage Shift: More Than Just a Spec

The transition to more powerful battery systems isn't just a spec sheet upgrade — it's a paradigm shift. Globally, companies like BYD and Mahindra have adopted high-voltage battery systems in their electric four-wheelers. Their motivation is clear: HV batteries allow for faster charging, better thermal regulation, and improved energy efficiency — all of which are essential for performance and convenience.

But these same benefits are now finding their place in electric two-wheelers, an area where space constraints and price sensitivity once made such technology seem out of reach. Thanks to advances in cell chemistry, battery management systems (BMS), and cooling technologies, high-voltage architectures are now compact and cost-effective enough to be viable for motorcycles and scooters as well.

Batteries operating at higher potential also offer inherent safety advantages. They manage heat dissipation more effectively, significantly reducing the risk of thermal incidents. In warm-weather regions like India, this efficient thermal handling becomes even more crucial. When paired with liquid cooling and intelligent BMS algorithms, these systems deliver consistent, reliable performance — whether you're inching through city traffic or cruising down a highway.

## The High-Voltage Shift: More Than Just a Spec

Perhaps the most visible benefit of modern EV battery design is the dramatic reduction in charging time. With the right infrastructure, today's EVs can recharge from 20% to 80% in under 20 minutes — a benchmark that is quickly becoming the industry norm.

In cutting-edge test environments, we're already seeing astonishing results: electric vehicles gaining 250 miles of range in under five minutes or jumping from 7% to 50% in four. Some next-gen systems can even deliver 12 miles of range with just a 10-second boost.

These charging speeds are enabled by what's known as a high C-rate — a metric that measures how quickly a battery can be charged relative to its total capacity. A higher C-rate means a battery can absorb energy more quickly, without overheating or degrading its life. This is what makes fast-charging viable and safe.

## Rethinking "Refuelling": A User-Centric View

Understanding the transformative potential of high-voltage (HV) technology for electric motorcycles requires a closer look at existing user behaviour—particularly the time and effort involved in refuelling an internal combustion engine (ICE) two-wheeler.

Today, refuelling during peak hours in urban areas typically includes multiple steps: queuing at the station, fuelling, making the payment, and often topping up tyre pressure. On a busy day, queuing alone can take between 4 to 7 minutes, with fuelling adding another 2 to 4 minutes. Payment—whether through UPI, cash, or card—can introduce an additional 2 to 3 minutes depending on network stability and transaction speed. If the rider opts to check tyre pressure, this can add 3 to 5 more minutes. Overall, the refuelling experience often takes 11 to 19 minutes in metro cities during peak hours, and 4 to 10 minutes during non-peak periods.

Beyond time, users also face inconveniences such as exposure to fuel fumes, weather conditions, and potential delays due to payment or equipment issues—all contributing to a less than seamless experience.

In the near future, electric motorcycles equipped with HV technology will offer a fundamentally superior alternative. Riders will be able to access public DC fast charging stations equipped with CCS2 DC chargers, and recharge their motorcycles from 20% to 80% in approximately 15 to 20 minutes. With India's EV infrastructure rapidly expanding and public EV charging stations becoming increasingly accessible, this process will be highly streamlined.

Digital payment integration, minimal physical effort, and the availability of both AC and DC car charging stations will transform EV charging into a far more convenient and efficient experience compared to conventional refuelling. As adoption grows, charging an electric bike will not only match the speed of fuelling but significantly enhance user convenience—setting a new benchmark in personal mobility.

## Closing the Gap Between Vision and Reality

The real breakthrough isn't just in battery technology. It lies in reimagining how users interact with their vehicles — and in eliminating the friction from one of the most routine activities: refuelling. With high-voltage systems enabling seamless compatibility with public fast chargers and offering rapid top-ups, electric two-wheelers are beginning to deliver not only sustainability but unmatched convenience. For adoption to truly scale, EVs must offer a user experience that rivals — or exceeds — what traditional vehicles provide. And today, technology exists to make that a reality.

In the next few years, the frustration of slow charging and limited range will seem as antiquated as dial-up internet. Emerging battery technology is becoming the foundation for that leap — quietly and steadily shaping the future of how we move.



## Karthikeyan A

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# AI-Powered Fleet Management:

## Optimizing Routes And Charging For Indian EV Fleets

Electric vehicles (EVs) are becoming an important part of transportation in India. Many businesses are now adding EVs to their fleets for delivery services, ride-sharing, and public transport. However, managing these EV fleets comes with new challenges. Companies need to plan routes, keep track of battery levels, and make sure vehicles are charged on time. This is where AI-powered fleet management systems are making a big difference. They help optimize routes and charging, saving time and money while making the fleet more efficient.

In India, traffic congestion and long travel distances can be tough for fleet operators. For electric vehicles, battery range is a big concern. AI-powered systems use real-time data to solve these problems. They analyze traffic conditions, road closures, and weather to plan the best routes for EVs. This helps reduce travel time and makes sure the vehicle does not run out of battery before reaching its destination. AI can also adjust the routes during the trip if there are any sudden traffic jams or delays, ensuring smooth operations.

Charging is another major challenge for EV fleets. Finding the right time and place to charge an electric vehicle is not easy, especially when charging stations are limited. AI systems help by predicting when each vehicle will need to charge and suggesting the best time to do it. This avoids long waits at charging stations and keeps vehicles on the road longer. Some advanced AI platforms can even guide the driver to less crowded charging stations and schedule charging when electricity prices are low, which helps save money.

For fleet operators in India, these AI-powered solutions offer several benefits. They help lower operational costs by reducing energy use and improving vehicle uptime. They also improve driver productivity because drivers spend less time stuck in traffic or looking for charging stations. Businesses can serve more customers and complete more trips in a day. In addition, using smart fleet management tools can help companies lower their carbon footprint by ensuring the efficient use of electric vehicles.

Several companies in India have already started using AI-based fleet management. Logistics providers, food delivery services, and ride-sharing companies are leading the way. As more EVs join the roads, AI will become even more important in managing fleets efficiently.

In the future, AI-powered fleet management systems will continue to improve. They may include features like predictive maintenance, where AI warns operators before a vehicle breaks down. This will reduce repair costs and prevent delays. AI can also help plan fleet expansion by analyzing which areas have a high demand for services and suggesting where to add new vehicles.

India's growing EV market will benefit greatly from these smart technologies. With better routes and charging plans, AI can help businesses run cleaner and more cost-effective fleets. As the country moves towards cleaner transportation, AI-powered fleet management will play a key role in making electric mobility smarter and more reliable.





# Smart Energy Solutions: Revolutionizing Electric Fleets with Advanced Lithium Batteries and IoT-Enabled Tracking

The world is witnessing a rapid shift toward smart energy solutions, transforming not just personal transportation but entire commercial fleets. From the invention of the first battery to today's IoT-driven fleet management, the journey of energy storage has been nothing short of revolutionary. Imagine a city where streets hum with silent electric vehicles seamlessly navigating their routes, each powered by cutting-edge lithium-ion batteries and guided by intelligent IoT networks!

Battery technology began with lead-acid batteries, introduced by Gaston Planté in 1859, which powered early EVs before gasoline cars took over. In the 1990s, lithium-ion batteries, pioneered by John B. Goodenough, Akira Yoshino, and Stanley Whittingham, revolutionized energy storage with higher energy density and longer lifespan. Today, they power everything from smartphones to electric vehicle fleets.

## The Rise of Electric Fleets

The shift towards electric mobility is accelerating. In 2025, the revenue in the Electric Vehicles market is projected to reach a staggering US\$784.2bn worldwide.

For commercial fleets, the transition to electric vehicles is driven by multiple factors:

- **Cost Efficiency:** EVs reduce fuel and maintenance costs, saving fleet operators up to 50% compared to internal combustion engine (ICE) vehicles.
- **Regulatory Push:** Governments worldwide are enforcing stricter emission norms, encouraging businesses to adopt clean energy solutions.
- **Sustainability Goals:** According to the International Energy Agency (IEA), transport accounts for more than a third of CO<sub>2</sub> emissions from end-use sectors. Switching to electric fleets significantly reduces environmental impact.

## Advancements in Lithium-Ion Battery Technology and the Role of IoT

Lithium-ion batteries have seen significant advancements, making EVs more practical for fleet operations:

- **Affordability:** Continuous innovation and economies of scale have driven down costs, making EV adoption more financially viable for businesses.
- **Improved Energy Storage:** New battery chemistries, including lithium-iron-phosphate (LFP) and solid-state designs, are enhancing energy density and efficiency, enabling EVs to cover longer distances on a single charge.
- **Longer Lifespan:** Modern lithium-ion batteries now offer extended durability with minimal performance degradation, ensuring reliability for fleet operations.

Beyond battery advancements, the emerging concept of the Internet-of-Batteries (IoB) presents significant opportunities for optimizing battery usage in electric vehicles (EVs). By integrating Internet-of-Things (IoT) technology with advanced battery systems and cloud computing, IoB enables real-time monitoring of battery health and performance, optimizing vehicle performance and energy efficiency:

- **Real-Time Battery Health Monitoring:** IoB-enabled sensors track charge cycles, temperature, and overall battery health, preventing failures and extending lifespan.
- **Predictive Maintenance:** AI-driven analytics identify potential battery issues before they cause breakdowns, reducing downtime and repair costs.
- **Optimized Energy Usage:** Smart battery management systems adjust power distribution in real-time, ensuring maximum efficiency and extending the driving range.
- **Fleet-Wide Data Integration:** IoB creates a connected ecosystem where fleet managers can analyze usage patterns, schedule charging more effectively, and reduce operational costs.

## The Role of IoT in Smart Fleet Management

As electric fleets expand, IoT-enabled tracking and management systems play a crucial role in optimizing performance and efficiency. These smart solutions offer:

- **Real-Time Battery Monitoring:** IoT sensors track battery health, temperature, and charge levels, preventing unexpected failures and optimizing charging schedules.
- **Predictive Maintenance:** AI-driven analytics identify potential mechanical issues before they cause breakdowns, reducing downtime and maintenance costs.
- **Optimized Routing:** GPS and AI-powered tracking enable fleets to optimize routes based on traffic, charge levels, and energy efficiency, maximizing operational savings.
- **Enhanced Safety:** IoT solutions provide real-time alerts for unsafe driving behaviours, reducing accident risks and improving driver performance.

The evolution of battery technology has unlocked the potential for electric fleets to replace traditional fuel-based transportation. With continuous advancements in lithium-ion batteries and IoT-driven fleet management, businesses can achieve greater efficiency, lower costs, and contribute to a sustainable future.

Additionally, IoB advantages include continuous battery monitoring and enhanced fleet management. However, implementing IoB at scale comes with challenges, such as ensuring battery data security, enabling seamless cross-platform integration, and overcoming technical complexities. Despite these hurdles, IoB has the potential to transform the EV industry.

As infrastructure improves and technology advances, the widespread adoption of smart energy solutions in fleet management is no longer a distant dream but an unfolding reality.



**Samrath Singh  
Kochar**

Founder and CEO  
**Trontek**



# The Role Of Foreign Investments In Scaling India's Electric Fleet Market

India's electric vehicle (EV) market is witnessing unprecedented growth, and foreign investments are playing a crucial role in accelerating this transformation. As the country aims to transition to cleaner mobility and develop a sustainable transportation ecosystem, the infusion of global capital and expertise is helping scale up its electric fleet segment. From electric two-wheelers to buses and commercial vehicles, foreign investors are backing innovation, infrastructure, and manufacturing capabilities, turning India into one of the world's most promising EV hubs.

The push for electric fleets in India is aligned with the government's broader goals of reducing emissions, cutting fuel imports, and improving urban air quality. Programs such as the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME II) scheme, along with state-level policies, have created a strong foundation for electric mobility. However, meeting the ambitious targets for EV adoption requires significant investments in technology, supply chains, charging infrastructure, and large-scale fleet deployment. This is where foreign investments have become a game changer.

Global automotive giants and venture capitalists are increasingly investing in Indian EV startups and fleet operators. Companies from countries like Japan, South Korea, Germany, and the United States are bringing advanced technologies, funding, and partnerships that are essential for scaling the market. These investments are supporting local manufacturing of electric vehicles, batteries, and key components. For instance, several foreign investors are funding battery production units and lithium-ion cell manufacturing, reducing India's dependence on imports and building a strong domestic supply chain.

One of the most noticeable impacts of foreign investments is in the commercial fleet sector. Logistics companies and e-commerce giants are partnering with EV fleet providers to electrify last-mile delivery services. Global funding has enabled Indian startups to expand their EV fleets rapidly, offering sustainable delivery options

across urban and rural regions. Foreign-backed companies are also introducing electric buses and ride-sharing services, helping cities reduce their carbon footprint while offering affordable and efficient transport solutions.

Investments are not limited to vehicles alone. Foreign capital is also flowing into the development of EV charging infrastructure. Building a reliable and accessible charging network is critical for fleet operators to scale up their services. Several global energy companies and infrastructure firms are entering partnerships with Indian counterparts to install fast-charging stations and battery swapping solutions. These initiatives are making it easier for fleet operators to adopt EVs on a large scale, reducing downtime and improving vehicle utilization rates.

Furthermore, international collaborations are fostering innovation in smart fleet management technologies. Fleet operators are leveraging telematics, artificial intelligence, and IoT-based platforms to monitor vehicle performance, optimize routes, and manage energy consumption. Foreign investments in these technologies are enhancing operational efficiency and lowering the total cost of ownership, making electric fleets more viable and attractive for businesses.

Despite these positive developments, challenges remain. Issues like high upfront costs, limited charging infrastructure in rural areas, and the need for a skilled workforce require continued focus and investment. However, the growing involvement of foreign players is helping to bridge these gaps. Their experience in mature EV markets is providing valuable insights and strategies for overcoming barriers to adoption in India.

In the coming years, foreign investments will continue to be a driving force in scaling India's electric fleet market. By supporting innovation, infrastructure, and sustainability, these investments are not just transforming mobility but are also contributing to India's vision of a cleaner and smarter transportation future.





# Charging ahead: How India's expanding EV infrastructure is driving E2W & E3W growth

India's EV ecosystem has hit an inflection point. In 2025, more than 5 million EVs are active on the road while over 2 million were sold in 2024. These are clear indications of an accelerating growth curve. EVs now account for 7.8 percent of all vehicle sales, up from 7.1 percent in FY24. Interestingly, the two segments spearheading this transformation and redefining mobility for the masses are electric two-wheelers (E2W) and three-wheelers (E3W).

However, a critical question emerges: Is the charging infrastructure growing fast enough to support this rapid EV adoption?

## The state of public charging

India's public charging infrastructure has expanded from 1,800 stations in 2022 to over 16,000 by 2024. While this nine-fold increase is impressive, it remains insufficient compared to the pace of EV adoption. Currently, India has just one public charger for every 135 EVs, a statistic far below the global benchmark of one charger per 6 to 20 vehicles.

Karnataka leads with 5,765 public chargers and plans for 2,500 more through public-private partnerships. As of December 2024, India has 25,202 public EV charging stations nationwide. However, this growth is unevenly distributed, with major urban centers like Bangalore and Mumbai significantly ahead while rural and Tier II regions lag. This infrastructure gap is becoming a bottleneck for further EV adoption.

## Infrastructure gap slowing EV growth

The demand for EVs is now outpacing the growth of charging infrastructure. According to Fortune Business Insights, India's EV market is expected to grow from USD 23.38 billion in 2024 to nearly USD 118 billion by 2032. NITI Aayog and the Rocky Mountain Institute project EV financing alone is set to hit 3.7 lakh crore rupees by 2030.

Despite this projected growth, the insufficient charging infrastructure is already hampering EV adoption rates. Uttar Pradesh, which accounts for 19 percent of the country's EVs, has just 582 public charging stations for over 11 lakh vehicles, which translates to approximately one station for every 230 EVs. This severe shortage creates range anxiety among potential buyers and directly impacts purchase decisions, especially in the mass-market two-wheeler and three-wheeler segments.

## The economic viability challenge

A critical factor hindering charging infrastructure development is economic viability. It is a persistent challenge that manifests differently across urban and rural areas:

- **Urban areas:** High real estate costs in metropolitan regions significantly impact the ROI for charging station operators. With land prices at a premium, setting up charging stations in dense urban areas becomes financially challenging, limiting expansion precisely where demand is highest.
- **Rural areas:** Rural regions face a contrasting problem, namely, the insufficient EV density to achieve economies of scale. Low utilization rates mean charging stations operate below capacity, making it difficult to recover capital investments despite lower setup costs.

This economic conundrum presents a circular challenge: limited charging infrastructure slows down EV adoption, while low adoption levels make infrastructure investments financially unviable for private players.

## Policy push - A turning point for charging infrastructure

The policy landscape for EV charging infrastructure is evolving significantly. While FAME I and II focused primarily on vehicle subsidies, the new PM E-Drive Scheme has an allocation of Rs. 2000 crore towards charging infrastructure, which marks a crucial shift. For the first time, there

is a dedicated budget allocation specifically for charging infrastructure development which addresses the gap in previous subsidy programs.

The PM E-Drive Scheme aims to support 2.47 million electric two-wheeler sales, convert more than 3 lakh three-wheelers, and deploy over 14,000 electric buses. Importantly, it includes provisions for charging infrastructure deployment, recognizing its role as a critical enabler for the EV ecosystem.

Under FAME Phase II, nearly 2,900 public charging stations were sanctioned across 68 cities and major highways. However, policy consistency remains essential. When the Delhi government withdrew road tax waivers for EVs in August 2024, electric two-wheeler sales dropped by 18 percent, following a 34 percent decline in July. This demonstrates how policy shifts can directly impact market dynamics.

## Solar power: A solution for rural EV infrastructure

Solar-powered charging stations present a viable solution, particularly for rural areas facing grid reliability challenges. India's solar energy potential is substantial, with 89.43 gigawatts of installed capacity and an estimated potential of 748 gigawatts peak.

Solar-powered charging infrastructure reduces grid dependence, cuts carbon emissions, and offers energy independence for remote communities. Additionally, it can improve the economic viability of rural charging stations by reducing operational costs, helping address the challenges of scale these locations face.

## The road ahead: Breaking the infrastructure impasse

To meet its 2030 target of 1.32 million public charging stations, India must add over 400,000 chargers annually. This ambitious goal requires:

- **Sustained government intervention:** The dedicated budget for charging infrastructure under PM E-Drive is a positive step, but further measures are needed to address the economic viability gap through subsidies, tax incentives, and public-private partnerships.
- **Innovative business models:** Exploring alternatives like battery swapping stations, particularly for two-wheelers and three-wheelers, could reduce infrastructure costs while addressing range anxiety.
- **Grid modernization:** Distribution companies must upgrade networks to handle increased demand from EV charging, incorporating smart grid technologies to manage load balancing.
- **Integration of renewable energy:** Expanding solar-powered charging stations, especially in rural areas, to overcome grid limitations and improve economic viability.

India's EV movement is no longer a future prospect. It's unfolding now across urban centers and gradually penetrating smaller towns. The infrastructure challenge represents both the largest barrier and the greatest opportunity for accelerating this transition. With targeted policies addressing the economic viability challenge and coordinated efforts between government and private stakeholders, India can build the robust charging network needed to support its electric mobility ambitions.



**Sumeru Shah**

Business Head - Electric Vehicles  
Ecofy

# Government Policies Shaping The Future Of Smart And Electric Fleets In India



India is witnessing a major shift towards electric mobility, and government policies are playing a big role in shaping the future of smart and electric fleets. As the country aims to reduce its carbon emissions and dependence on fossil fuels, electric vehicles (EVs) are becoming a key focus. The government's support through various policies and initiatives is encouraging businesses to adopt electric fleets, making transportation cleaner and more efficient.

One of the major policy frameworks supporting this shift is the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) scheme. Launched in 2015, FAME has helped bring down the upfront cost of electric vehicles through subsidies. The second phase, FAME II, focuses on commercial vehicles, including electric buses, taxis, and two-wheelers used for deliveries. This has motivated fleet operators in India to switch to electric vehicles, as the incentives make EVs more affordable and appealing.

The Production Linked Incentive (PLI) scheme is another major step by the government to promote EV manufacturing and advanced battery production in India. The aim is to make the country self-reliant by encouraging local production. This not only supports the growth of electric fleets but also reduces costs, as batteries are one of the most expensive components of an EV. Lower battery costs directly benefit fleet operators by making EVs cheaper and increasing the return on investment.

The Goods and Services Tax (GST) on electric vehicles has also been reduced to 5%, compared to 28% on conventional petrol and diesel vehicles. This tax reduction makes EVs more affordable, particularly for businesses looking to expand their fleets. Additionally, loans on electric vehicles are now part of the Reserve Bank of India's priority sector lending guidelines, making it easier for businesses to secure financing for fleet expansion.

Several state governments are also launching their own EV policies, offering benefits like exemptions on road tax, and registration fees, and even providing subsidies for charging infrastructure. States like Delhi, Maharashtra, and Tamil Nadu have announced clear targets for increasing electric vehicle adoption in public and private transportation. This provides a solid foundation for fleet operators to invest in EVs, knowing there is policy support at both central and state levels.

To encourage the development of charging infrastructure, the government has introduced schemes that promote the setting up of public and private EV charging stations. Fleet operators are also encouraged to develop their own captive charging infrastructure, reducing the dependence on public charging networks and ensuring operational efficiency.

One of the most exciting areas in government policy is the focus on smart fleets. Policies are promoting the use of telematics, real-time monitoring, and fleet management software to improve efficiency and reduce costs. Smart fleet management systems allow operators to track vehicle performance, plan better routes, and optimize energy consumption, making electric fleets more productive.

Government policies are playing a crucial role in shaping the future of smart and electric fleets in India. With continuous support through incentives, tax benefits, and infrastructure development, India is steadily moving towards a cleaner, smarter, and more efficient transportation system. Businesses adopting electric fleets today are not just reducing their carbon footprint but are also preparing for a sustainable future.



# Future-Ready Fleets: The Role of Smart Technology in India's Electric Vehicle Transformation

The global transportation industry is witnessing a paradigm shift, and India is at the forefront of this transformation with its aggressive push towards electrification. The country's ambitious target of achieving 30% electric vehicle (EV) penetration by 2030 is not just an environmental necessity but also a strategic move to reduce dependency on fossil fuels. However, for this transition to be truly effective, the integration of smart technology is imperative. Future-ready fleets, powered by cutting-edge innovations, are set to redefine India's mobility landscape.



## Smart Technology: The Driving Force of EV Evolution

As India accelerates its EV adoption, smart technology is playing a critical role in optimizing efficiency, enhancing performance, and ensuring seamless fleet management. The synergy between artificial intelligence (AI), the Internet of Things (IoT), big data analytics, and cloud computing is paving the way for an advanced, intelligent, and connected EV ecosystem.

- **AI-Powered Fleet Management**

Artificial intelligence is revolutionizing fleet management by enabling predictive maintenance, route optimization, and driver behavior analysis. AI-driven analytics can help fleet operators predict battery life cycles, assess vehicle health in real-time, and schedule proactive maintenance, thereby reducing downtime and operational costs. With machine learning algorithms analyzing vast amounts of data, fleets can be optimized for maximum efficiency and cost-effectiveness.

- **IoT for Connected Vehicles**

The Internet of Things (IoT) has transformed traditional vehicles into connected smart machines. IoT sensors integrated into EVs collect and transmit crucial data such as battery performance, energy consumption, and environmental impact. This real-time data helps fleet operators make informed decisions, ensuring better energy efficiency and reduced carbon footprints. Moreover, smart diagnostics can alert drivers and fleet managers to potential issues before they escalate, ensuring safety and reliability.

- **Telematics for Efficiency and Safety**

Telematics solutions are bridging the gap between EV performance and fleet optimization. By combining GPS tracking, wireless communication, and onboard diagnostics, telematics systems provide real-time insights into vehicle location, speed, battery health, and energy usage. This data empowers fleet managers to enhance efficiency, minimize energy wastage, and improve overall fleet safety by monitoring driver behavior.

## The Role of Smart Charging Infrastructure

One of the major challenges hindering widespread EV adoption in India is the availability of charging infrastructure. Smart charging solutions are addressing this issue by ensuring optimized energy distribution and seamless charging experiences.

- **Vehicle-to-Grid (V2G) Integration**

V2G technology allows EVs to not only draw power from the grid but also feed excess energy back into it. This two-way communication helps balance grid demand, reduces energy wastage, and enhances sustainability. By leveraging AI and machine learning, V2G-enabled fleets can strategically charge during off-peak hours, lowering operational costs while supporting the energy ecosystem.

- **Wireless and Fast Charging Solutions**

Wireless charging and ultra-fast charging stations are streamlining EV adoption by reducing charging time and eliminating infrastructure bottlenecks. Smart grids equipped with real-time analytics can predict power demand and distribute energy efficiently, ensuring optimal resource utilization.

## Retrofitting: A Smart, Cost-Effective Transition to EVs

India's existing fleet of internal combustion engine (ICE) vehicles presents a significant challenge in the transition to electrification. Retrofitting conventional vehicles with hybrid electric solutions is an innovative approach to accelerating EV adoption without the high costs associated with new EV purchases. Companies like Folks Motor are pioneering this space, offering hybrid electric retrofit solutions that blend smart technology with sustainability. Retrofitted vehicles equipped with AI-driven power management systems, regenerative braking, and IoT-enabled performance monitoring can contribute to a seamless shift towards electrification.

## The Road Ahead

The future of India's electric vehicle ecosystem lies in smart, data-driven solutions that enhance efficiency, safety, and sustainability. As we move towards a cleaner, greener future, the integration of AI, IoT, telematics, and advanced charging infrastructure will be the key differentiators in driving the success of EV fleets. Companies like Folks Motor are playing a pivotal role in this transformation, ensuring that India's road to electrification is not just about replacing vehicles but about creating a smarter, more efficient mobility ecosystem.

The time to embrace smart technology in EV fleets is now—because the future is electric, and the future is intelligent.



**Nikhil Anand  
Khurana**

MD and CEO  
Folks Motor



## DRIVING INDIA'S EV TRANSITION WITH INNOVATION AND EXPANSION

### Uday Narang

Founder and Chairman  
Omega Seiki Pvt. Ltd.

#### KEY HIGHLIGHTS ▼

- Focused on last-mile and cargo EVs to meet India's growing clean transport demand efficiently.
- Expanding localized manufacturing and partnerships to strengthen EV adoption in Tier 2 and Tier 3 cities.
- Integrating smart tech and sustainable strategies to deliver cost-effective, reliable commercial EV solutions nationwide.

#### India's EV market is evolving rapidly — how is Omega Seiki Mobility positioning itself to capture market share in the electric three-wheeler and commercial segment?

India's electric vehicle market is evolving at an incredible pace, especially in the commercial and last-mile mobility space, and at Omega Seiki Mobility, we've positioned ourselves to lead this transformation. We recognized early on that electric three-wheelers and small commercial vehicles would be pivotal in addressing the country's growing need for clean, efficient, and affordable transportation solutions. That's why we've built a diverse product lineup focused on cargo and passenger mobility, designed specifically for urban and semi-urban markets where these vehicles play a critical role in everyday logistics and commuting.

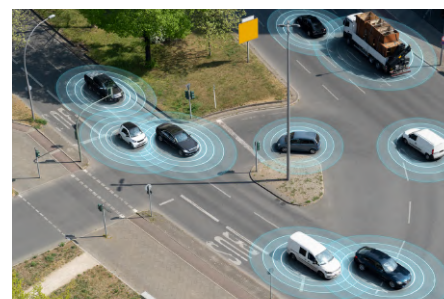
Our approach has always been to stay deeply rooted in indigenous manufacturing while embracing cutting-edge technology. We've invested heavily in our local production facilities, giving us complete control over quality, scalability, and cost efficiency. Beyond manufacturing, we actively collaborate with technology partners, battery innovators, and financial institutions to create a strong, supportive ecosystem for our customers. By tackling challenges like charging infrastructure, vehicle financing, and fleet management head-on, we're ensuring that our clients not only have access to reliable electric vehicles but also the services and infrastructure that make adoption seamless.



What truly sets us apart, though, is our commitment to innovation and connected mobility solutions. We're integrating smart telematics, IoT features, and data-driven tools into our vehicles, giving fleet operators real-time insights and improving overall operational efficiency. Additionally, we take pride in offering customized products tailored to our customer's operational needs — be it range, battery type (fixed, fast-charging, or swappable), color options, or different powertrain configurations. We're one of the very few companies in the market offering this level of personalization. And just like fashion powerhouse Zara, our product range is always evolving — rapidly responding to market trends, customer feedback, and technological advancements. This agility ensures that Omega Seiki Mobility remains ahead of the curve in India's dynamic electric mobility sector.

#### What key manufacturing strategies or innovations is Omega Seiki implementing to maintain cost competitiveness while ensuring product quality in the Indian EV space?

At Omega Seiki Mobility, maintaining a fine balance between cost competitiveness and product quality is central to our manufacturing strategy. Being a part of the Anglian Omega Group gives us a distinct advantage in this regard. Several of our sister companies are actively involved in the component manufacturing business and steel body fabrication, which not only ensures consistent quality but also brings significant cost efficiencies by reducing our reliance on external suppliers. This in-house capability allows us to control critical inputs and streamline our supply chain, directly translating into competitive pricing for our customers while upholding stringent product standards.



Another unique aspect of our operational strategy is our in-house fleet service, UnoXpress. We use this fleet extensively to test our vehicles under real-world conditions before they officially hit the market. This hands-on, operational testing approach enables us to identify and address potential issues, optimize vehicle performance, and fine-tune product specifications based on practical usage data. By continuously validating our vehicles in live logistics environments, we not only enhance product reliability but also avoid costly post-launch corrections, further strengthening our cost management strategy while ensuring our vehicles are truly built for Indian roads and operating conditions.

Moreover, we strongly believe in the power of collaboration over competition, which is why Omega Seiki Mobility has forged strategic associations with partners across India and internationally. These partnerships cover key, cost-intensive technologies like batteries, powertrains, and even emerging solutions such as hydrogen-powered vehicles. By working closely with specialists in these areas, we avoid heavy capital expenditure in non-core R&D while still accessing the latest innovations. This association-led model allows us to stay agile, cost-effective, and technologically competitive, ensuring that we consistently deliver high-quality, future-ready electric mobility solutions to the market.



### How is Omega Seiki Mobility aligning its production capacity and supply chain to meet the growing demand for electric vehicles in Tier 2 and Tier 3 cities?

At Omega Seiki Mobility, we recognize that the next big wave of electric vehicle adoption in India is coming from Tier 2 and Tier 3 cities, where demand for affordable, efficient, and reliable mobility solutions is rapidly rising. To align with this shift, we've been strategically scaling our production capacity through the expansion of our manufacturing footprint in key regions. Our plants in Faridabad and Pune are equipped with modular production lines, allowing us to ramp up volumes quickly based on regional demand. This decentralized manufacturing model helps us reduce logistics costs, improve delivery timelines, and cater more effectively to the unique needs of smaller cities and towns.

On the supply chain front, we're building a strong, localized vendor and partner network across the country to support this growing demand. By working closely with local suppliers for components, battery assemblies, and after-sales services, we ensure faster turnaround times and cost efficiencies. Additionally, we've established a network of regional dealerships, service centers, and battery-swapping stations in emerging markets, making it easier for customers in Tier 2 and Tier 3 cities to access, operate, and maintain our vehicles. This hyper-localized approach to production, supply chain management, and customer support is helping us bridge the accessibility gap and position Omega Seiki Mobility as a trusted EV brand beyond metropolitan India.

### With government incentives under schemes like FAME and PLI, how has your EV manufacturing roadmap evolved over the last two years?

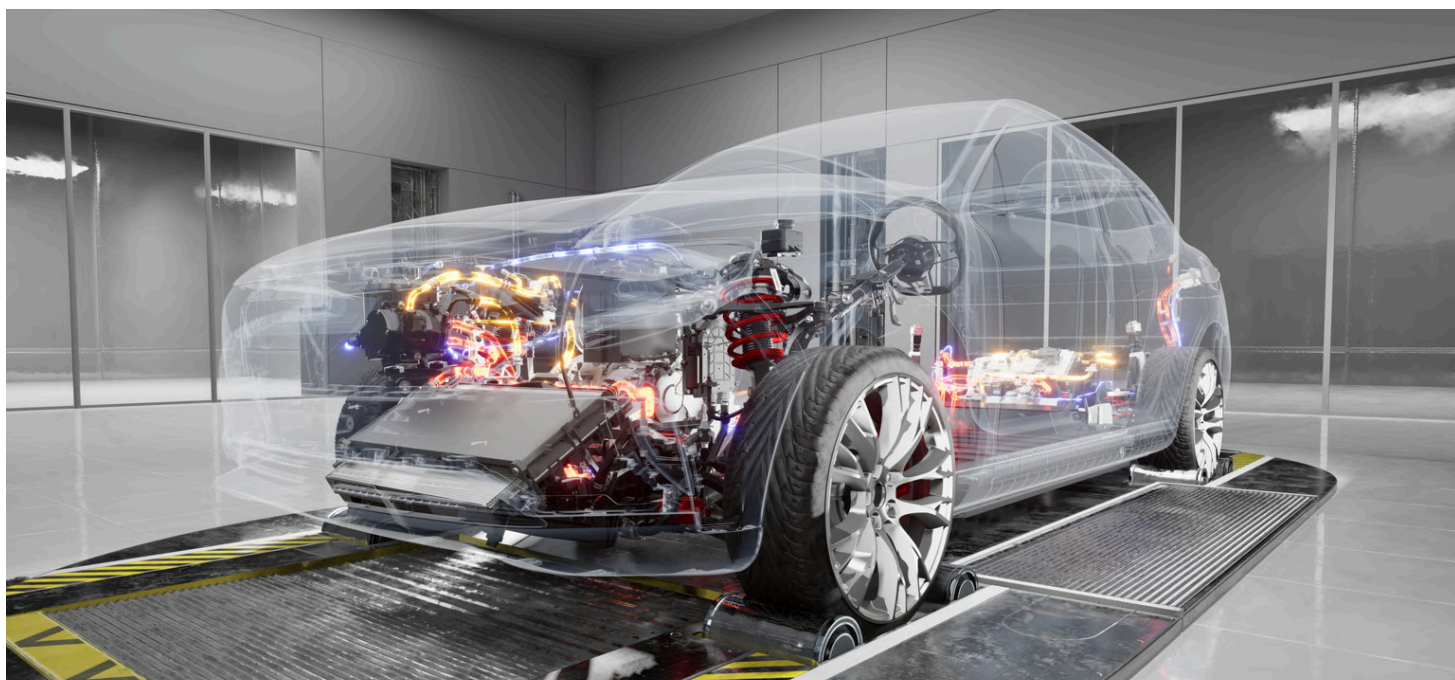
Over the past two years, government initiatives like FAME-II and the Production-Linked Incentive (PLI) scheme have played a significant role in shaping Omega Seiki Mobility's manufacturing roadmap. These incentives have not only made electric vehicles more affordable for end-users but have also encouraged manufacturers like us to scale up operations, localize critical components, and invest in new technologies. In response, we've expanded our manufacturing capacity across multiple locations and increased our focus on indigenizing key components like battery packs, drivetrains, and vehicle telematics systems. The financial support and policy push have given us the confidence to fast-track product development and diversify into new segments, including cargo three-wheelers, passenger EVs, and even hydrogen-powered solutions.

That said, as an industry, we believe there's a growing need for stable, long-term policy frameworks to sustain this momentum. Frequent changes or uncertainties in incentive structures can disrupt investment plans and supply chain commitments. We hope to see continued government focus on creating a predictable, supportive environment for EV manufacturers, which will help us and others in the industry plan better, optimize operations, and confidently introduce advanced products for both metro and non-metro markets. A clear, consistent policy roadmap will be key to achieving India's ambitious electrification goals and strengthening the domestic EV ecosystem in the years to come.

### How do you foresee Omega Seiki's role in shaping the future of India's commercial EV segment over the next 5 years?

Over the next five years, we see Omega Seiki Mobility playing a pivotal role in driving the growth and evolution of India's commercial EV segment. Our focus will remain on creating a comprehensive, future-ready portfolio of electric vehicles tailored for last-mile logistics, cargo transport, and passenger mobility — segments that are seeing the fastest electrification due to their high daily usage and operational cost advantages. We plan to expand our product range across multiple powertrain options, including fixed, swappable, and fast-charging battery systems, and venture into alternative fuels like hydrogen-powered vehicles. By continuously innovating and addressing the unique needs of Indian logistics and transport businesses, we aim to be at the forefront of making clean, efficient mobility accessible across both urban and rural markets.

Beyond products, our ambition is to build a complete ecosystem around commercial electric mobility. This includes strengthening our partnerships for battery technology, financing solutions, fleet management software, and after-sales services, as well as expanding our network of service centers and battery-swapping stations into Tier 2 and Tier 3 cities. With government support and industry collaboration, we foresee Omega Seiki Mobility setting new benchmarks for operational efficiency, total cost of ownership, and vehicle reliability in the commercial EV space. Our vision is to not just sell vehicles, but to help reshape India's commercial transport infrastructure for a cleaner, smarter, and more sustainable future.



# REVOLUTION ON WHEELS: HOW ZEVO IS ELECTRIFYING INDIAN LOGISTICS



## ADITYA SINGH

CEO

**Zevo**

### KEY HIGHLIGHTS

- ZEVO is building India's first electric, temperature-controlled logistics ecosystem to drive sustainable impact.
- It uses IoT and real-time tracking to boost fleet efficiency and uptime across 25+ cities.
- ZEVO tackles EV challenges through smart partnerships and a future-ready tech approach.

**ZEVO is positioned as a next-gen platform revolutionizing the EV fleet and logistics space. Can you share the story behind ZEVO's inception and the vision driving its growth in the smart and electric fleet ecosystem?**

The idea for ZEVO was born out of a deep-rooted desire to create something meaningful something that could drive real change in both the environment and the lives of people. Dhruv (my co-founder) and I have been friends since childhood, and both of us are Chartered Accountants by profession. But numbers aside, what truly connected us was our shared passion for building something sustainable and impactful. We saw a massive gap in the sustainable logistics landscape, so we decided to tackle that head-on by creating India's first electric, temperature-controlled logistics platform. Our fleet today includes Electric 2-Wheelers, 3-Wheelers, 4-Wheelers, Electric Trucks, and Refrigerated Electric Vehicles, capable of operating at -30°C for up to 160 km. And we didn't stop there we built the ZEVO Rental App, launched rapid delivery options, and now offer end-to-end EV based supply chain solutions across 25+ cities. Our vision is clear: We want to lead India's transition to sustainable logistics. But more than just being a logistics brand, ZEVO is about building an ecosystem one that empowers gig workers, uplifts small businesses, and reimagines what green mobility can look like in India. By 2030, we want to be one of the top logistics and mobility providers in the country not just in terms of scale, but in terms of the impact we create.

**With last-mile delivery becoming increasingly electric, how is ZEVO leveraging technology and data to enhance fleet efficiency, uptime, and sustainability for clients?**

We utilize various tools to enhance the efficiency of our operations. Our vehicles are equipped with real-time fleet tracking and IoT-enabled vehicle monitoring systems. These tools give us complete visibility into vehicle location, performance metrics, and trip efficiency at any given time. This not only improves delivery accuracy but also allows us to respond swiftly to any on-ground issues. We've also integrated IoT-enabled monitoring systems in every vehicle. These systems provide real-time data on everything from battery health and vehicle location to driving behavior. This insight allows us to optimize our day-to-day operations.

**What challenges have you faced while scaling electric fleets across urban and semi-urban logistics routes, and how has ZEVO navigated them successfully?**

Scaling an electric fleet across India's diverse landscape has been both exciting and incredibly challenging. During the initial phases, we faced several challenges, including the high cost of adopting and maintaining an electric vehicle fleet, which required significant upfront investment. Urban centers come with their own set of issues congestion, range anxiety, charging infrastructure limitations while semi-urban and rural areas often lack the basic ecosystem needed to support EV operations. Building trust among businesses to shift to EV logistics was another hurdle, as many were skeptical about the reliability and range of electric vehicles. Infrastructure limitations, such as the lack of widespread EV charging stations, also added to the challenge. We have collaborated with the leading charging and parking infrastructure providers to ensure a stable ecosystem for our operations PAN India.

**How do you see the role of battery swapping, charging infrastructure, and fleet telematics evolving in India's electric fleet ecosystem and how is ZEVO staying ahead of the curve?**

Battery swapping has huge potential, especially for last-mile and hyper local delivery use cases. The ability to cut downtime from hours to minutes can transform fleet productivity. That said, it needs standardization across OEMs and strong backend tech to make it scalable. We're closely evaluating swapping partnerships and exploring fleet configurations where vehicles can either fast-charge or swap depending on the route and application. When it comes to charging infrastructure, the current network in India is still patchy and inconsistent, especially outside major metro cities. Staying ahead of the curve, for us, means building infrastructure before the demand curve hits and designing technology that makes our operations adaptive, not reactive.

**As the CEO of a rapidly growing EV fleet company, what advice would you offer to new-age logistics start-ups looking to enter the electric mobility space in India?**

The electric mobility space in India is full of opportunity, but it's also full of challenges. Everyone wants to invest in the EV space, but very few are focused on the ground realities things like operational efficiency, infrastructure gaps, asset utilization, and gig worker empowerment. To build something sustainable and scalable, it is necessary to start by understanding the pain points at every level of the supply chain, not just the top line. Also, partnerships play a crucial role in the logistics space. Whether it's collaborating with OEMs, working with local governments or partnerships for charging infrastructure, collaboration is key. This ecosystem cannot be built by just one company; it'll take a network of various aligned players.





# Understanding Total Cost Of Ownership (TCO) For Electric Fleets In India

The shift toward electric fleets in India is gaining momentum as businesses and fleet operators increasingly recognize the long-term benefits of electric vehicles (EVs). One of the key factors driving this transition is a better understanding of the Total Cost of Ownership (TCO) for electric fleets. TCO goes beyond the upfront purchase price and considers the full lifecycle costs associated with owning and operating a vehicle. For fleet managers, understanding TCO is crucial in making informed decisions about switching from traditional internal combustion engine (ICE) vehicles to electric alternatives.

The initial cost of electric vehicles in India, particularly commercial EVs like electric two-wheelers, three-wheelers, and four-wheelers, is typically higher than their diesel or petrol counterparts. However, the higher purchase price is only part of the equation. When factors like fuel savings, lower maintenance costs, government incentives, and increased vehicle life are taken into account, EVs often offer a more economical option over time.

One of the major contributors to lower TCO in electric fleets is the significant reduction in fuel costs. Electricity, as a source of energy, is cheaper and more stable in price compared to fossil fuels. Fleet operators can achieve up to 60-70% savings on fuel expenses by switching to EVs. Additionally, for fleets that install their own charging infrastructure or tap into renewable energy sources like solar power, the energy cost benefits become even greater.

Maintenance is another area where EVs offer a clear advantage. With fewer moving parts, no need for engine oil, and less wear on components such as brakes due to regenerative braking systems, electric vehicles typically incur lower maintenance costs. Studies suggest that EV maintenance costs can be 30-50% lower than those of ICE vehicles, resulting in further savings over the vehicle's lifecycle.



Government incentives and policy support also play a significant role in reducing the TCO of electric fleets in India. The FAME-II scheme (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) offers subsidies on electric vehicle purchases, while several state governments provide additional incentives such as road tax exemptions, registration fee waivers, and subsidies for setting up charging infrastructure. These benefits directly reduce the upfront investment required and improve the financial feasibility of fleet electrification.

Battery performance and lifecycle are critical components of TCO analysis. Battery costs have been declining steadily, and advancements in battery technology are improving the range and lifespan of EVs. Most fleet vehicles today come with battery warranties that cover up to 8 years or 160,000 kilometers, providing assurance to fleet operators about long-term reliability. Some fleet operators are also exploring battery leasing and energy-as-a-service models to further optimize costs and manage battery-related risks.

Operational factors, including vehicle utilization rates, route planning, and charging strategies, also influence TCO. Fleets with predictable routes and high daily utilization rates are best suited for EV adoption. Route optimization and strategic charging schedules ensure minimal downtime and efficient use of assets. Additionally, the development of fast-charging infrastructure in urban centers and highways is addressing range anxiety concerns and improving fleet operational efficiency.

Understanding TCO helps fleet operators look beyond the initial price tag and focus on the long-term value proposition of electric fleets. With the combined benefits of lower operating costs, reduced environmental impact, and regulatory compliance, electric fleets are becoming a smarter and more sustainable choice for India's evolving mobility needs.

As India accelerates toward a future driven by smart and electric fleets, TCO will remain a key metric guiding investment decisions. Fleet electrification is no longer just about being environmentally responsible—it's about making smart financial and operational decisions that will shape the future of fleet management in the country.



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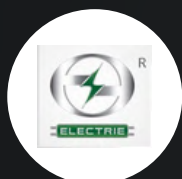
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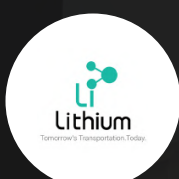
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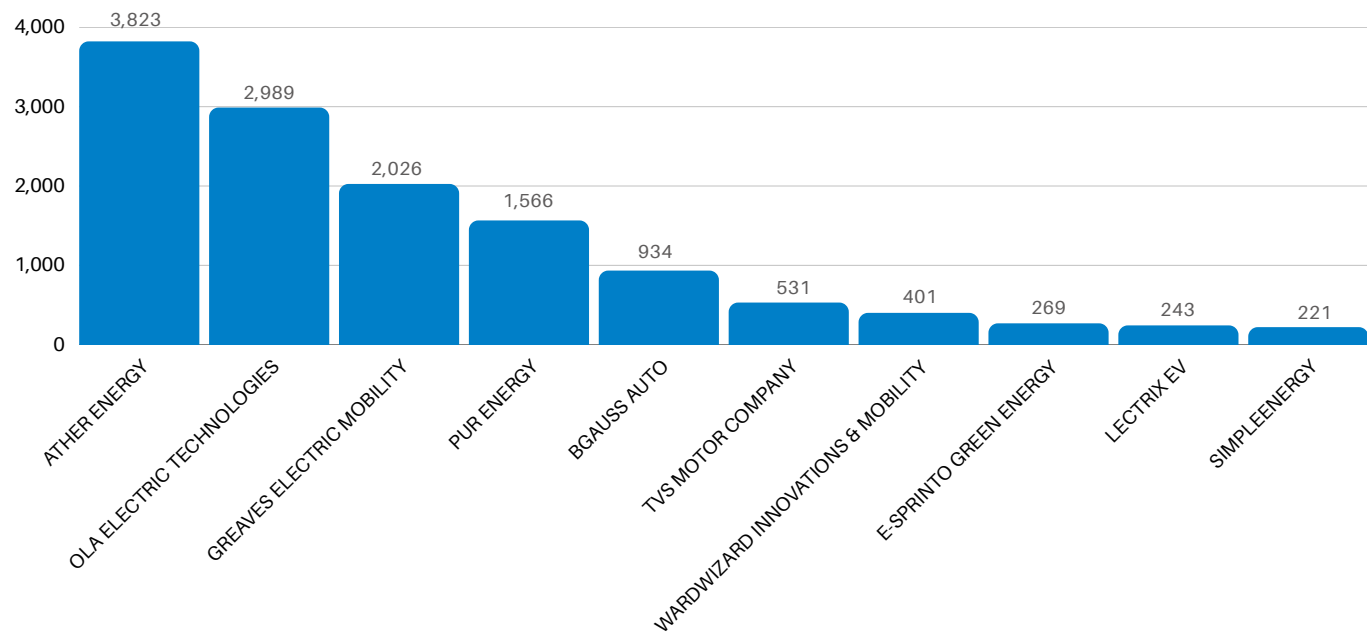


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## TOP EV TWO WHEELER SALES IN INDIA, FEBRUARY 2025

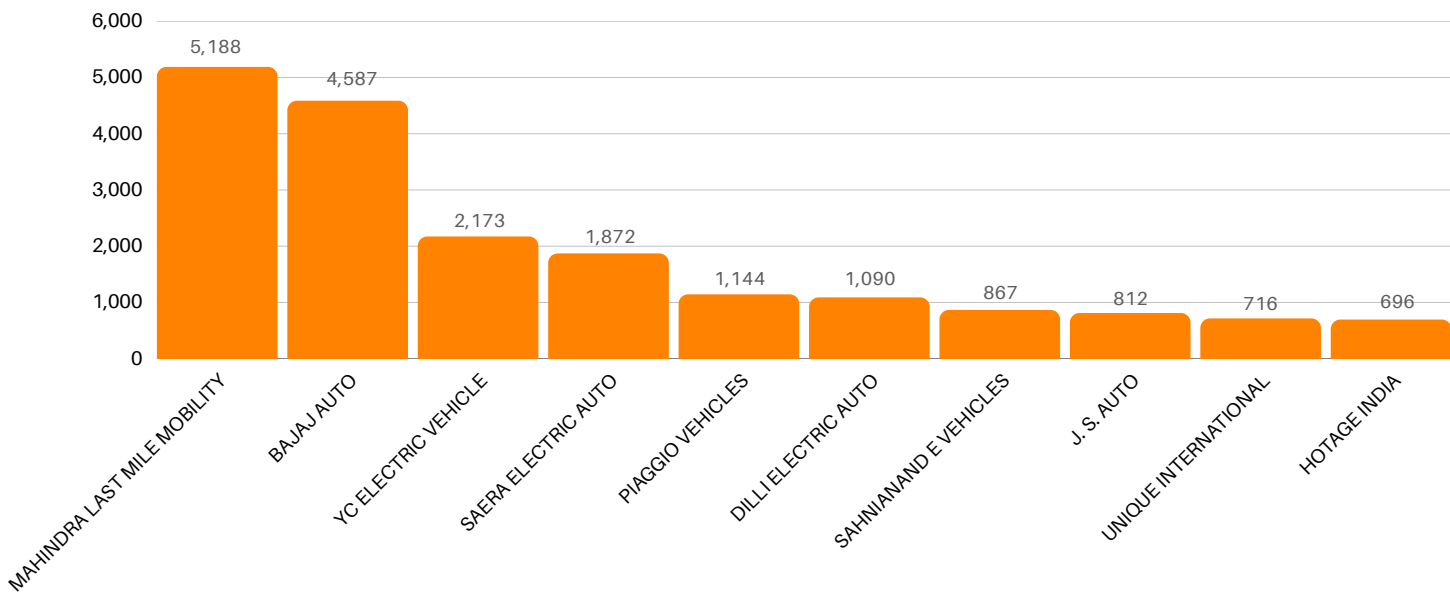


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## TOP EV THREE WHEELER SALES IN INDIA, FEBRUARY 2025



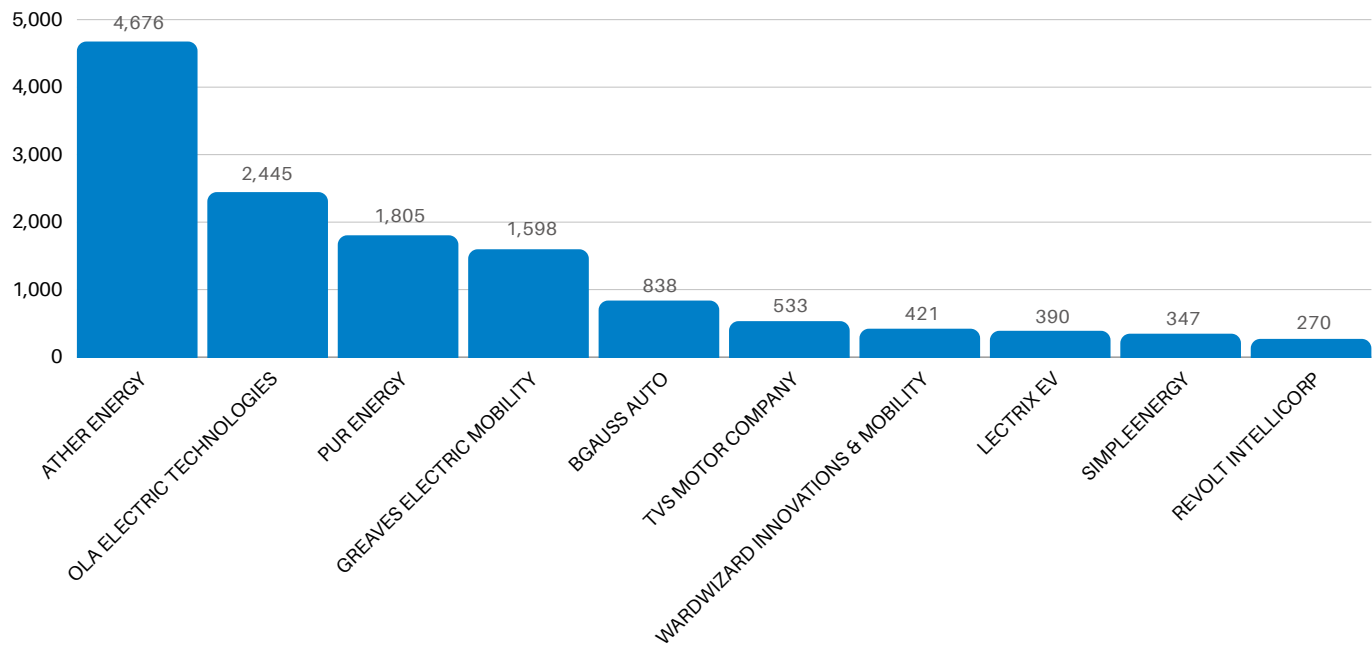
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## TOP EV TWO WHEELER SALES IN INDIA, MARCH 2025

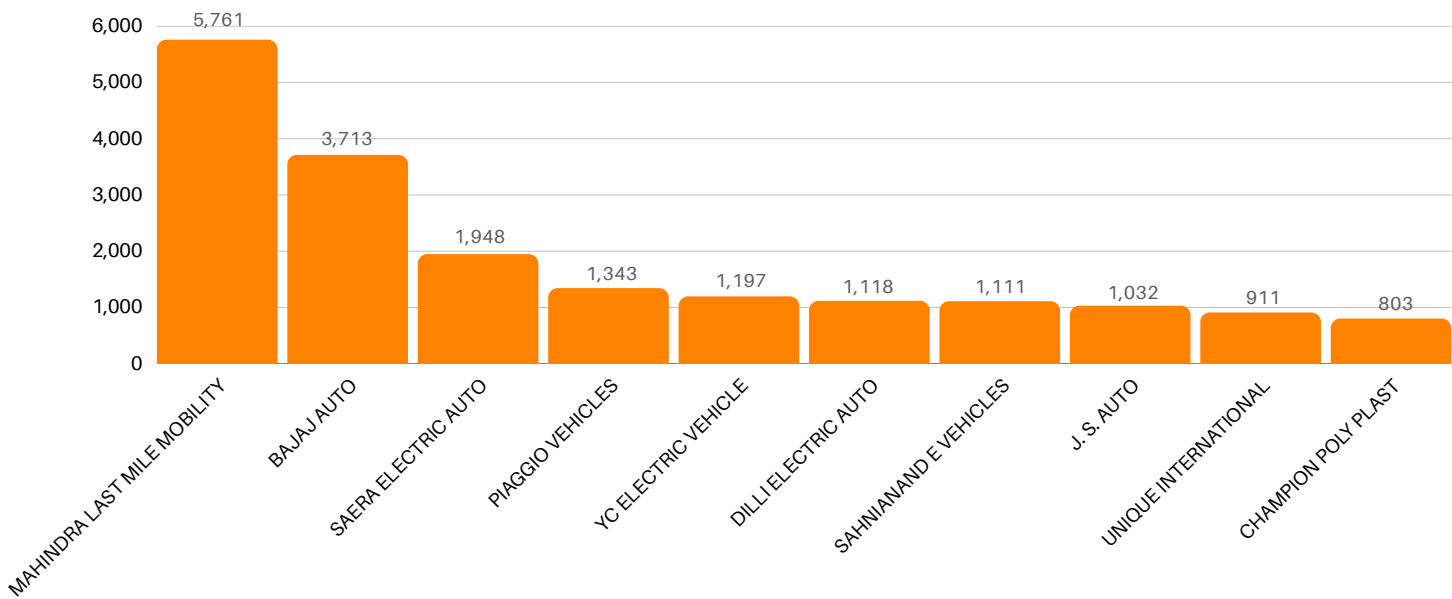


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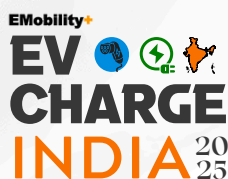
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