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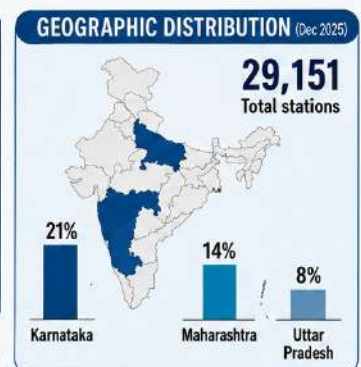
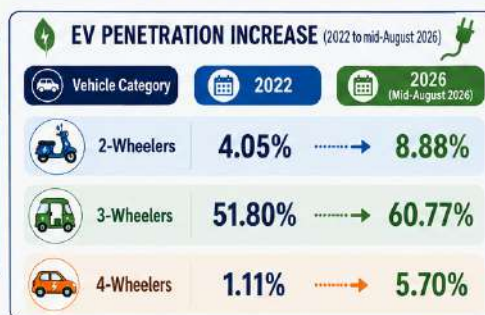
Rubix Sectoral Insights

INDIA'S CHARGE POINT OPERATOR (CPO) LANDSCAPE

India's CPO industry is expanding rapidly, driven by rising EV adoption, supportive policies, diverse business models, and increasing investment, despite utilisation and infrastructure challenges.

Executive Summary

INDIA'S EV CHARGING OPERATOR (CPO) ECOSYSTEM: OVERVIEW & OUTLOOK



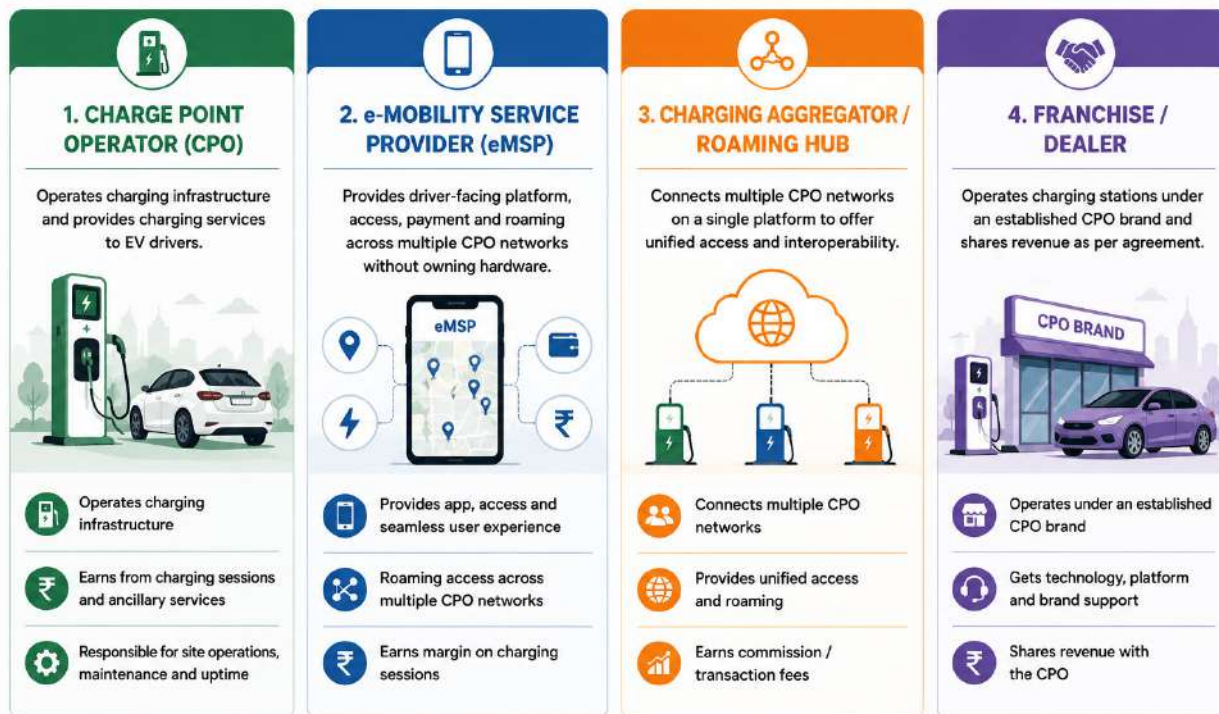
India's EV charging ecosystem is scaling up rapidly, supported by strong policy push, increasing EV adoption, and growing investment. Strategic collaboration and innovation will be key to building a robust, accessible, and future-ready charging infrastructure.



Overall Landscape of EV Charging Infrastructure

Diverse operators are driving India's EV charging infrastructure

TYPES OF PLAYERS IN INDIA'S EV CHARGING ECOSYSTEM



An EV charging ecosystem comprises multiple players involved in deploying, operating, managing, and providing access to charging infrastructure. While CPOs operate charging infrastructure, other players such as e-Mobility Service Providers (eMSPs), charging aggregators, and franchise/dealer partners support customer access, network connectivity, and station deployment. Together, these players enable the delivery of charging services to EV users while creating multiple avenues for investment and revenue generation across the ecosystem. With over 200 CPOs estimated to be operating across India, CPOs remain central to the charging ecosystem, responsible for deploying, operating, and maintaining charging infrastructure and ensuring station availability to EV users¹. The landscape comprises dedicated CPOs focused primarily on charging networks, alongside diversified operators such as oil and gas companies, power utilities, automotive OEMs, and mobility players, each leveraging their existing assets, customer base, and capabilities to scale charging infrastructure.

Indicative Costing for Setting Up an EV Charging Station

Charger hardware is only one component of CPO investment. The capital requirement for setting up an EV charging station varies significantly depending on charger power, number of charging bays, electrical infrastructure, site conditions, and land costs. While charger hardware represents the largest individual equipment cost, CPOs also incur expenditure on civil and electrical works, software/Charging Point Management Systems (CPMS), grid connectivity and, where applicable, land leasing. Higher-power DC charging stations typically require substantially greater investment due to higher-rated chargers, transformers, cabling, and electrical infrastructure. Consequently, the choice of charging configuration and site has a significant bearing on the overall upfront investment and expected payback period.

Component	AC Level 2 (7–22 kW)	DC Fast (30–60 kW)	DC Ultra Fast (120–150 kW+)
Charger hardware	INR 0.4–1.5 lakh	INR 10–25 lakh	INR 40–80 lakh
Civil + electrical works	INR 1–3 lakh	INR 3–8 lakh	INR 5–15 lakh
CPMS software – annual	INR 0.5–2 lakh	INR 2–5 lakh	INR 3–8 lakh
Indicative cost total per bay (approx)	INR 2–5 lakh	INR 15–35 lakh	INR 50 lakh–1 crore

Source: Pulse Energy

Note: The table strictly refers to indicative costs, and actual costs vary by equipment specifications, site conditions, electrical infrastructure, and location. Land costs are excluded.

¹ Pulse Energy, July 2026

Different Types of Business Models for CPOs

CPO REVENUE / BUSINESS MODEL



CPOs can adopt different business models depending on the customer segment, charging location, utilisation levels, ownership of the site, and the nature of commercial partnerships. While pay-per-use charging remains the primary model, CPOs are increasingly combining multiple revenue streams to improve utilisation, strengthen customer retention, and enhance station-level economics. Urban public-charging networks may rely on transaction-based charging, subscriptions, and ancillary services, while highway and fleet-focused models can benefit from higher

utilisation, contracted volumes, and site-host partnerships.

The key business models include energy- or time-based charging, idle fees, subscriptions, fleet contracts, roaming arrangements, revenue sharing with site hosts, and ancillary services, allowing CPOs to diversify revenue beyond standalone charging transactions. In practice, a single charging station may simultaneously employ multiple models, depending on its location and target customer segment.

Revenue/Business Model	How it works
Energy-based charging	Customers pay based on electricity consumed, typically on an INR/kWh basis.
Time-based charging	Customers are charged based on charging or connection time.
Idle fees	Additional fees are charged when vehicles continue occupying a charging bay after charging is completed.
Subscriptions/memberships	Users pay a recurring fee for discounted rates, bundled charging or other benefits.
Fleet/contracted charging	CPOs enter into contracts with fleet operators, corporates, or mobility companies to provide dedicated or preferential charging services.
Roaming	CPOs earn from charging transactions generated through eMSPs and other roaming partners that provide their users access to the network.
Revenue-sharing/site-host model	CPOs deploy and operate chargers at third-party locations and share charging revenue with the property or site owner.
Ancillary revenue	Advertising, premium parking, Food and Beverage (F&B), retail partnerships, and other services generate additional income at suitable charging locations.

Overview of EV Charging Stations

Geographic concentration creates opportunities for wider CPO deployment

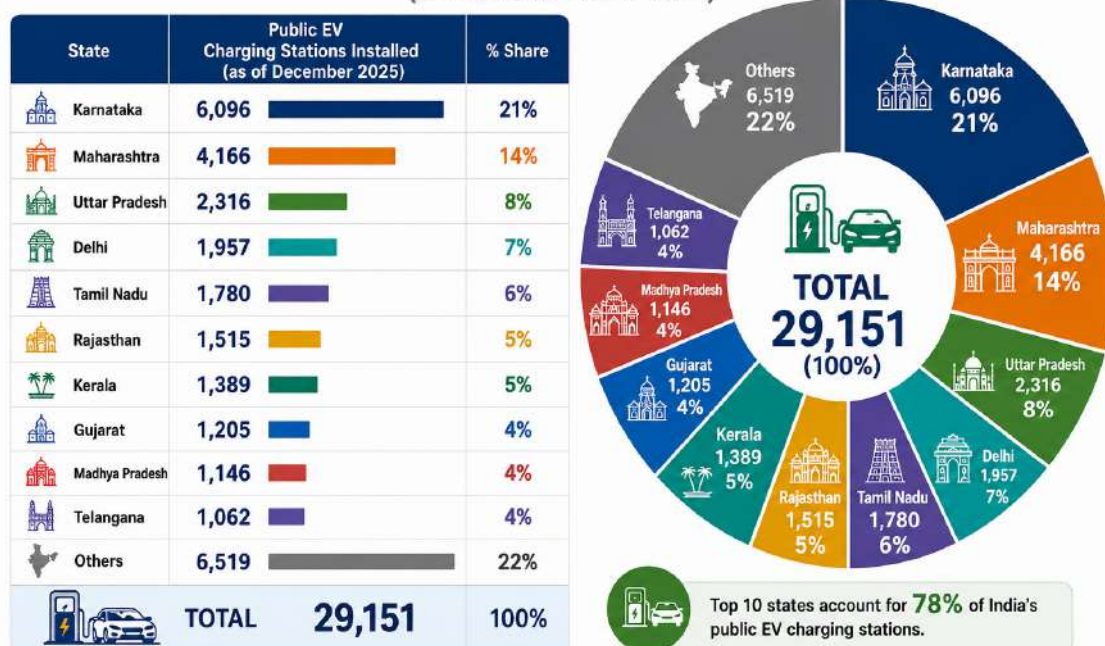
The proliferation of electric vehicles across India is accelerating the need for a wider and more accessible public charging network. According to the Ministry of Heavy Industries, India had 29,151 electric vehicle charging stations installed as of December 2025, comprising 8,805 EV fast charging stations and 20,346 slow charging stations². The number 29,151 represents a nearly six-fold increase from around 5,000 charging stations in 2022, highlighting the rapid expansion of India's public charging infrastructure³.

The expansion has been supported by rising EV adoption, government initiatives, and increasing investment in charging infrastructure. Of the 29,151 EV charging

stations estimated by the Ministry of Heavy Industries, the top 10 states collectively accounted for nearly 78% of India's charging stations, indicating a high concentration of infrastructure across leading EV markets. Karnataka accounted for 21% of India's total charging stations, followed by Maharashtra (14%), Uttar Pradesh (8%), Delhi (7%), and Tamil Nadu (6%)⁴. This concentration reflects higher EV adoption, stronger urban demand, and more developed supporting ecosystems in these states. The state-wise distribution highlights the significant variation in charging infrastructure availability across India and the potential for CPOs to expand into underserved markets. The distribution of India's top 10 states in terms of charging stations is presented below.

PUBLIC EV CHARGING STATIONS IN INDIA

(AS OF DECEMBER 2025)



Source: As per the latest information available for state-wise data from the Ministry of Heavy Industries; data is as of December 2025

Supportive EV infrastructure policies across five leading states

Karnataka: The state plans to add 2,500 charging stations through PPPs, while targeting charging points every 60–70 km along state highways to strengthen inter-city charging coverage.

Maharashtra: Its EV Policy 2025–2030, backed by an INR 19.9 billion budget, mandates charging stations every 25 km on highways, at least one fast charger at every fuel station and MSRTC depot, and charging points in government office parking facilities.

Uttar Pradesh: Its revised EV policy includes upstream infrastructure costs within the subsidy framework, reducing financial barriers for CPOs and supporting faster deployment of public charging infrastructure.

Delhi: EV manufacturers operating in Delhi are required to install at least one public charging station at each dealership, expanding charging availability through the existing automotive retail network.

Tamil Nadu: Its EV Policy 2025 promotes the expansion of DC fast charging and broader charging infrastructure through financial incentives, streamlined approvals, and greater private-sector participation.

^{2 & 4} Ministry of Heavy Industries, Press Information Bureau of India, December 2025

³ Meta Materials Circular Markets (MMCM), May 2026

Overview of India's EV Charger Landscape

India's charging ecosystem comprises a range of AC and DC charging solutions, with the appropriate charger type varying by vehicle segment, dwell time, location, and utilisation requirements.

Charger Type	Typical Application
AC Slow	Two-wheelers, three-wheelers, overnight home, and workplace charging
AC Fast (Type 2)	Passenger vehicles at homes, offices, and commercial destinations
DC Fast (CCS2)	Passenger vehicles at highways, urban hubs, and fleet locations
DC Ultra-Fast	Long-distance corridors and commercial fleets
Bharat DC-001	Legacy applications and public charging

Lower-power chargers dominate India's EV charging base, creating headroom for higher-power CPO infrastructure

Category	No. of Chargers
< 30 kW	48,709
30–60 kW	15,753
61–120 kW	1,513
121–240 kW	534
> 240 kW	9
(A) Total	66,518
(B) BSS	1,139
(A+B) Grand Total	67,657



As of August 7, 2026, India had 67,657 EV chargers, including 1,139 chargers associated with Battery Swapping Stations (BSS). Excluding BSS, 48,709 chargers, or approximately 73% of the 66,518 chargers, are rated below 30 kW. A further 15,753 chargers are rated between 30 kW and 60 kW, while only 1,513 chargers fall within the 61–120 kW range. Higher-power infrastructure remains limited, with 534 chargers rated at 121–240 kW and just nine above 240 kW. The concentration of lower-power chargers is broadly consistent with India's relatively higher electrification of two- and three-wheelers, which generally have lower charging-power requirements than passenger vehicles. EV penetration stands at approximately 8.88% for two-wheelers and 60.77% for three-wheelers, compared to 5.70% for four-wheelers⁵.

The limited penetration of higher-power infrastructure creates potential headroom for CPOs as passenger EV adoption scales and demand for faster charging increases. Only 2,056 non-BSS chargers, or approximately 3% of the installed base, are rated above 60 kW, while just 543 chargers are rated above 120 kW. This suggests opportunities to expand DC fast and ultra-fast charging infrastructure, particularly along highways, at urban mobility hubs and at high-utilisation fleet locations. However, deployment requires significant upfront investment, with overall project costs increasing further after accounting for land, grid connectivity, civil works, and permissions. This creates both a capital requirement and an opportunity for CPOs, particularly as demand shifts towards faster charging and higher-utilisation locations.



⁵ Clean Mobility Shift / Vahan Dashboard

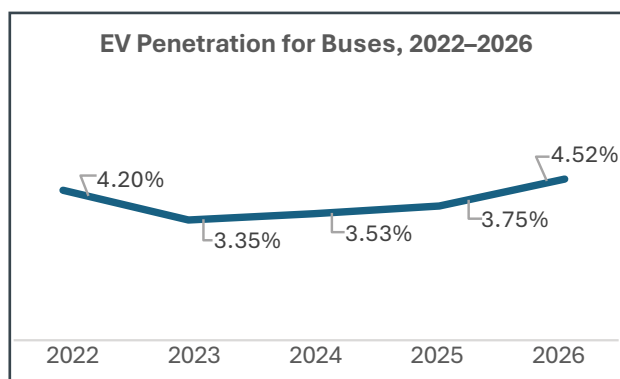
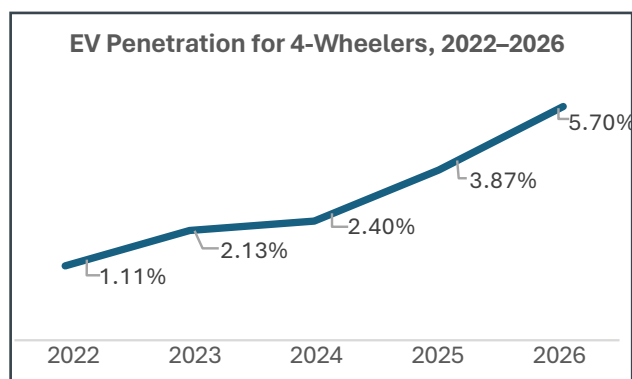
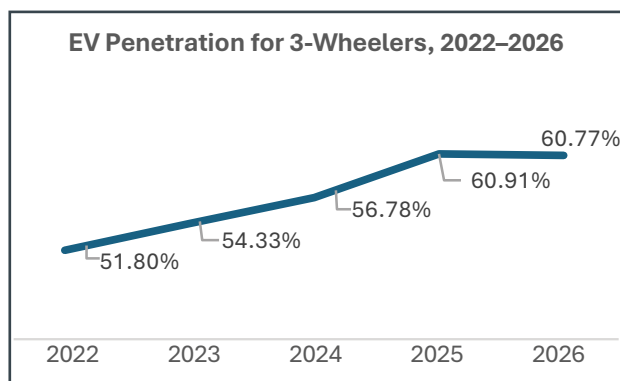
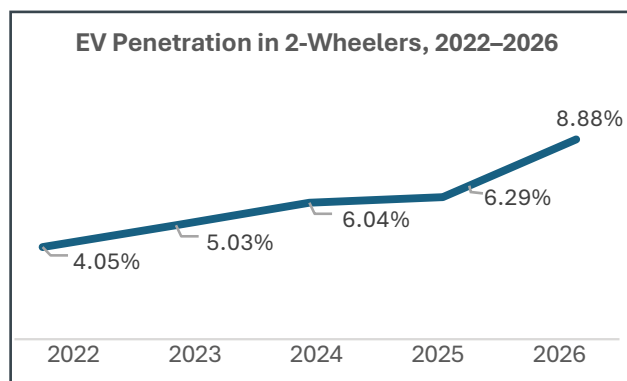
Industry Key Drivers

Key Drivers for CPO Market Growth

Structural and policy drivers that are expanding opportunities for CPOs in India

Driver	Impact for CPOs	Implication
 Rising EV Adoption Expands the Demand for Public Charging	 Larger EV base drives more charging transactions and long-term demand for charging networks.	Very High 
 Simplified Licensing Lowers the Entry Barriers for CPOs	 Reduced regulatory complexity enables faster market entry and lower compliance burden.	Very High 
 Supportive Regulations Enable Smoother Deployment	 Guidelines, grid connectivity norms and deployment support ease infrastructure roll-out.	High 
 PM E-DRIVE Initiative Accelerates Public Charging Expansion	 Government funding and targets are expanding public charging infrastructure across India.	Very High 
 Diversifying Participation Brings More Players into the Market	 Energy companies, OEMs, fleets and retailers are scaling networks and customer reach.	Very High 
 Fleet Electrification Drives Higher Utilisation Demand	 Fleets create predictable, high-frequency charging needs and improve utilisation potential.	Very High 

Rising EV Adoption Expands the Demand for Public Charging



Source: Clean Mobility Shift / Vahan Dashboard. Note: Data for 2026 is as on 17 August 2026

India's growing EV adoption is emerging as a key driver for the CPO ecosystem, with the country recording 28.2 million vehicle registrations in 2025, including more than 2.3 million EVs⁶. Electric passenger vehicle sales reached an all-time high of over 1.76 lakh units in 2025, registering 77% YoY growth, supported by a strong demand for SUVs and MPVs and a growing range of EV models⁷. The expanding EV portfolio is further broadening consumer choice, with recent models such as the Mahindra XEV 9S, Tata Harrier EV, and Maruti Suzuki e Vitara adding options across the SUV and mass-market segments.

EV penetration is particularly high among 3Ws, reaching 60.91% in 2025, while in 2W penetration increased to 6.29% and in 4W penetration to 3.87%; by 2026, these had risen further to 8.88% and 5.70%, respectively. The growing EV fleet across passenger, commercial, and fleet segments is expected to increase the charging frequency and utilisation of charging infrastructure, thereby improving the revenue potential of CPOs. Continued EV penetration, increasing model availability, and the expansion of EVs into mass-market and commercial mobility segments are, therefore, expected to remain the key demand drivers for India's CPO market.

Simplified Licensing Lowers the Entry Barriers for CPOs

Setting up Electric Vehicle Charging Stations (EVCS) has been notified **as an unlicensed activity**, and private entities are permitted to install EV charging stations in accordance with the Ministry of Power (MoP) Guidelines dated 17 September 2024⁸. **This eliminates the need for a separate electricity distribution licence and lowers the entry barriers for private players.** Some major regulatory requirements focused on the aspects that directly apply to deployment and operation of CPOs include⁹:

- Comply with applicable Bureau of Indian Standards (BIS)

standards, including IS 17017, covering charger safety, connectors, and communication protocols to ensure standardised and safe infrastructure deployment.

- Meet applicable state or UT EV policy requirements, including any provisions governing the deployment and operation of EV charging infrastructure.
- Adhere to prescribed charging infrastructure standards and technical requirements, ensuring chargers and associated equipment meet applicable safety and performance specifications.
- Follow applicable site-level and local regulatory requirements, including permissions or approvals that may be required for deploying charging infrastructure at specific locations.

Clearly defined requirements around BIS standards, state or UT EV policies, technical specifications, and site-level approvals provide greater certainty for CPOs when deploying and operating charging infrastructure. This reduces regulatory ambiguity, supports faster project execution and encourages greater private-sector participation and expansion of charging networks across India.

Supportive Regulations Enable Smoother Deployment

The revised Guidelines and Standards for Electric Vehicle Charging Infrastructure are progressively reducing deployment friction and creating a more structured operating environment for CPOs. The guidelines have moved beyond technical standards to facilitate project execution, demand-led site planning, and participation in government-supported charging infrastructure. Some major ones are listed in the table below.

Guideline	Impact for CPO
Streamlined online approvals: DISCOMs are required to provide online single-window systems for charging infrastructure applications, with prescribed timelines for processing and providing connections.	This can reduce administrative friction and improve project-execution predictability for CPOs.
Demand-based infrastructure planning: State nodal agencies and city authorities are required to periodically map the geographic distribution of potential EV charging demand.	This can help CPOs identify high-potential locations and improve network-planning and site-selection decisions.
Minimum charging-station density: Charging stations are to be established at every 25 km on both sides of highways, while dedicated charging stations for long-range and heavy-duty EVs are to be provided at every 100 km on both sides of highways. In cities, at least one charging station is to be established within each 3 km × 3 km grid.	This creates clear geographic coverage requirements and expands the addressable locations for CPO deployment, particularly along highways and in urban areas.
Private-sector participation under PM E-DRIVE: Operational guidelines issued in September 2025 establish a framework for EVPCS projects and provide for participation by eligible public and private entities.	This creates a clearer route for CPOs to participate in government-supported charging projects and expand their installed networks.

⁶ India Energy Storage Alliance (IESA), January 2026

⁷ Autocar India, January 2026

⁸ Press Information Bureau, February 2026

⁹ Pulse Energy, July 2026

Government support for public EV charging infrastructure is a key driver of CPO growth, with INR 9.12 billion under FAME-II specifically allocated for public EV charging infrastructure and INR 20 billion under PM E-DRIVE for public EV charging infrastructure across India¹⁰. The government has extended the PM E-DRIVE by two years to March 31, 2028, increasing the overall outlay to INR 119 billion, including INR 20 billion for EV public charging stations. However, as of 24 March 2026, no charging stations had been installed under the scheme, indicating a significant opportunity for CPOs to participate in and benefit from the extended implementation window¹¹.

The PM E-DRIVE envisages approximately 72,300 public EV charging stations¹². The planned network comprises 22,100 fast chargers for e-4Ws, 1,800 chargers for e-buses and 48,400 chargers for e-2Ws and e-3Ws, aimed at improving charging accessibility and boosting user

confidence¹³ (Official sources such as PIB and NewsOnAIR seem to use the terms “charging stations”, “charging points” and “chargers” interchangeably when describing the planned deployment). The infrastructure is intended to be deployed in key cities with high EV penetration and along select highways, while a subsequent government announcement envisages charging infrastructure across 50 national highway corridors and high-traffic locations such as metro cities, toll plazas, railway stations, airports, fuel outlets, and state highways. In addition, PM E-DRIVE provides capital subsidies for upstream infrastructure and EVSE, with support varying by location category, helping reduce the upfront investment required for charging infrastructure. These government-backed investments and subsidies create deployment opportunities for CPOs, reduce infrastructure-related investment barriers, and support the expansion of charging networks across high-demand and underserved locations.

Category	Key locations	Upstream Infrastructure Subsidy	Electric Vehicle Charging Station (EVSE) Subsidy
A	State/Central Government premises	100%	100%
B	Railway stations, airports, public-sector fuel outlets, bus/metro stations, municipal parking, toll plazas, and highway amenities	80%	70%
C	Streets, shopping malls, market complexes, highways/expressways, and other locations	80%	—
D	Battery swapping stations/battery charging stations	80%	—

Source: Press Information Bureau, December 2025

Diversifying Participation Brings More Players into the Market

The growing EV fleet, rising demand for convenient charging and the need to expand charging coverage are attracting a wider range of companies into the EV charging ecosystem. Companies are increasingly leveraging existing customer networks, real estate, energy infrastructure, and mobility assets to enter the charging business, broadening investment beyond traditional charging specialists.

- **Dedicated CPOs** focus primarily on developing, operating, and managing EV charging networks as their core business, with players such as Magenta Group, Fortum India/GLIDA, Charge Zone, Volttic, chargeMOD, Bolt.Earth, Statiq, and Zeon Charging, building networks across India. These operators are expanding charging availability by investing in public charging infrastructure and providing network, payment, and customer-management services.
- **Diversified CPOs**, including power and energy companies such as Tata Power, Adani TotalEnergies E-Mobility Limited, and NTPC Vidyut Vyapar Nigam

Limited (NVVN); government-backed energy-efficiency and e-mobility entities such as Convergence Energy Services Limited (CESL), which is a subsidiary of Energy Efficiency Services Limited (EESL); oil & gas companies such as Indian Oil Corporation Limited, Bharat Petroleum Corporation Limited, Hindustan Petroleum Corporation Limited, and Jio-bp; and automotive and mobility players such as Mahindra & Mahindra Limited and Ather Energy Limited are adding charging operations alongside their existing businesses. EESL/CESL have also deployed public EV charging infrastructure across multiple states, demonstrating the role of government-backed entities in supporting charging-network development.

This broader participation brings additional capital, locations, customer networks, and operational capabilities into the charging market, while enabling established companies to participate in the transition towards electric mobility. The growing participation of both dedicated and diversified CPOs is therefore accelerating charging network expansion, improving accessibility for EV users, and strengthening the overall CPO ecosystem.

¹⁰ Ministry of Heavy Industries, February 2026

¹¹ Ministry of Heavy Industries, March 2026

¹² ET Auto, September 2025

¹³ Ministry of Heavy Industries, November 2024

Fleet Electrification Drives Higher Utilisation Demand

According to the International Energy Agency, India's commercial EV ecosystem is expanding rapidly, with e-3Ws sales rising 15% in 2025 to nearly 800,000 vehicles. e-3Ws, which are widely used for last-mile passenger and goods transportation, make up a high-utilisation segment that requires frequent charging. In December 2025, the 2.88 lakh-unit target for L5 e-3Ws under the PM E-DRIVE scheme was also achieved ahead of schedule, displaying

strong electrification momentum¹⁴. Meanwhile, the PM-eBus Sewa programme had sanctioned 9,360 e-buses across 106 cities as of July 2026¹⁵, supported by around 317 MVA of associated power infrastructure, while its Payment Security Mechanism scheme is supporting the deployment of more than 38,000 e-buses between FY2024-25 and FY2028-29¹⁶. The growing electrification of 3Ws, buses, and other commercial fleets is, therefore, creating recurring and predictable charging demand, supporting higher utilisation of CPO networks.

Industry Key Challenges

Key Challenges for CPO Market Growth

Structural and operational challenges that can impact the growth and sustainability of CPOs in India

Challenge	Impact for CPOs	Implication
 Low Utilisation Limits Revenue Generation and Asset Productivity	✓ Low utilisation (1–5%) delays revenue realisation and extends payback period on charging investments.	Very High
 High and Uneven Electricity Costs Weaken Charging Station Economics	✓ High tariffs and demand charges reduce margins and make pricing less competitive.	Very High
 Third-Party Sites Create Limited Visibility into Electricity Costs, Payments and Compliance for CPOs	✓ Limited visibility into host bill payments, invoicing and GST compliance, and energy efficiency can impact uptime and increase operating costs.	High
 Expensive and Difficult Site Acquisition Constrains Expansion and Station Economics	✓ High site costs and long gestation limit network expansion and impact return on investment.	Very High
 Grid Constraints and Network Upgrade Requirements Can Delay Charging-station Commissioning	✓ Limited grid capacity and upgrade requirements can delay approvals and station commissioning.	High
 High Uptime Expectations Require Reliable Operations and Maintenance	✓ Downtime impacts customer trust and utilisation, leading to revenue loss and higher O&M costs.	High

Low Utilisation Limits Revenue Generation and Asset Productivity

Low utilisation remains a major challenge for EV charging operators in India. According to an SBI report on E-mobility and Charging Infrastructure in India (April 2026), utilisation

remains low, with current levels ranging between 1% and 3% across most charging stations. In comparison, an S&P Global report published in 2024 estimated EV charging-station utilisation in India at around 5%, indicating that public charging infrastructure continues to operate well below its potential capacity.

Implication for CPOs

Low utilisation directly limits revenue generation per charger, making it difficult for CPOs to recover upfront investments and achieve attractive returns on charging assets. This is particularly challenging because CPOs incur relatively high fixed costs for chargers, electrical infrastructure, land and maintenance, regardless of the number of charging sessions. As a result, operators need to carefully select high-demand locations and improve charger utilisation to shorten payback periods and enhance station profitability.

¹⁴ Ministry of Heavy Industries, December 2025

¹⁵ PM-eBus Sewa Scheme

¹⁶ Prime Minister's Office (PMO) September 2024

High and Uneven Electricity Costs Weaken Charging Station Economics

High electricity costs and demand charges remain a significant challenge for CPOs, with electricity tariffs varying considerably across states and commercial tariff structures. According to Pulse Energy, electricity tariffs for EV charging can range from INR 6 to INR 15 per kWh, depending on the state, tariff structure and

site arrangement, while maintenance can add around 5%–10% of CAPEX annually. Typical customer charging prices in 2026 are estimated at INR 7–12/kWh for AC charging and INR 12–25/kWh for DC fast charging. The Ministry of Power's India EV Digest 2023 has also identified high EV charging tariffs, lack of uniformity across states, and high fixed/demand charges as factors affecting the commercial viability of public charging stations.

Implication for CPOs

The relatively narrow spread between electricity procurement costs and customer charging rates can compress CPO margins, particularly at stations with low utilisation. High fixed or demand charges further increase the cost burden because operators may have to pay for sanctioned power capacity even when the chargers are not operating at high utilisation. Consequently, CPO profitability depends heavily on tariff optimisation, high charger utilisation, and efficient management of electricity demand.

Third-party Charging Sites Create Complex Electricity Billing, Payment, and Reconciliation Requirements for CPOs

As CPOs expand through third-party host-site arrangements, charging stations are being deployed across highway restaurants, malls, hotels, and other commercial or semi-public premises. In such arrangements, the CPO may operate the charging infrastructure while the host provides the site and electricity connection. This creates multiple dependencies for CPOs beyond simply determining the electricity consumed by the charging station.

A significant challenge is that many hosts, particularly highway restaurants and other smaller establishments, are relatively unorganised. Although hosts are generally responsible for paying the electricity bill, CPOs may have limited or no visibility into whether these bills have been paid on time. Any delay or default by the host can potentially result in disruption of electricity supply to the charging station, directly affecting charger uptime and revenue generation.

CPOs also face challenges in obtaining timely invoices from hosts. The diverse host base, comprising both GST-

registered and non-GST-registered entities, requires CPOs to track the applicability of GST on payments to hosts. Where GST invoices are issued, CPOs may also need to verify whether the host has appropriately reported the invoice on the GST Network (GSTN), particularly where the CPO intends to claim the associated Input Tax Credit (ITC).

Further, CPOs may have limited visibility into the efficiency of energy expenditure at host sites. Factors such as an inappropriate load factor or poor power factor can result in additional electricity charges or penalties being imposed on the host. Where these costs are subsequently passed on to the CPO, limited visibility into the underlying utility bill and consumption parameters can make it difficult for CPOs to validate the charges, ensure fair cost allocation, and identify corrective actions. CPOs may therefore need to engage with hosts to improve energy-spend efficiency.

The decentralised nature of utility billing across geographically dispersed third-party sites can consequently make the utility bill management process inefficient for CPOs. Centralising bill collection, validation, payment tracking, GST/ITC checks, energy-cost analysis, and reconciliation can help CPOs improve financial control and operational visibility across their charging network.

Implication for CPOs

Third-party host arrangements can create limited visibility and control over electricity payments, host invoicing, GST compliance, energy efficiency, and utility penalties, potentially affecting charging-station uptime and operating costs. As CPO networks scale, managing these processes manually across disparate hosts can increase administrative effort and make it difficult to identify billing errors, optimise energy expenditure, and ensure timely payments. Centralised and automated utility-bill management such as Vayana's *BillsToPay* application can help CPOs improve bill visibility, payment tracking, GST/ITC compliance, energy-cost optimisation, and uptime across distributed charging networks.

Expensive and Difficult Site Acquisition Constrains Expansion and Station Economics

The Government's charging guidelines recognise the high cost of land rent and provide for public land to be offered

on a revenue-sharing model at INR 1/kWh for 10 years. The Institute for Transportation and Development Policy (ITDP) also identifies land availability and coordination with land-owning agencies as major barriers.

Implication for CPOs

Prime locations with high traffic and adequate parking are expensive, while cheaper locations may not generate sufficient utilisation. This creates a difficult trade-off between visibility, accessibility, and station economics.

Grid Constraints and Network Upgrade Requirements Can Delay Charging-station Commissioning

The Ministry of Power's guidelines prescribe connection timelines of 7 days in metros, 15 days in other municipal areas, and 30 days in rural areas; however, these timelines can be affected where distribution-network augmentation is required. NITI Aayog notes

that obtaining a connection from an existing network without expansion is generally easier and more economical, whereas network extension can be time-consuming and may require the applicant to share the associated costs. The rules governing power supply from the existing network can, therefore, have significant cost and time implications for commissioning EV charging infrastructure.

Implication for CPOs

Delays in obtaining grid connections or completing network upgrades can postpone station commissioning and revenue generation, while cost-sharing requirements can increase project CAPEX. CPOs may, therefore, need to assess available grid capacity and upgrade requirements before finalising sites, making locations with adequate existing power infrastructure more attractive.

High Uptime Expectations Require Reliable Operations and Maintenance

The Government's EV charging guidelines require charging stations to maintain a minimum monthly uptime of 98%,

excluding the downtime caused by power failures and scheduled maintenance. This means charging services must remain operational and available to EV users for at least 98% of the time, placing a strong emphasis on equipment reliability and timely maintenance.

Implication for CPOs

Maintaining high uptime requires CPOs to invest in preventive maintenance, remote monitoring, spare parts, and rapid-response service networks, increasing operating costs. Equipment failures or prolonged repairs can reduce charging availability, resulting in lost revenue and lower customer confidence, while repeated outages can adversely affect a CPO's reputation and station utilisation.

Key Initiatives by Major Players

Company /Brand Name	Brief Description
Bharat Petroleum Corporation Limited (BPCL)	In July 2026, BPCL announced plans to expand its EV charging network across major highways, as a part of a broader expansion of its retail offerings.
Hindustan Petroleum Corporation Limited (HPCL)	In March 2026, HPCL signed an agreement with Charge_iN by Mahindra to develop EV charging stations across HPCL retail outlets.
Mahindra & Mahindra Limited/ Charge_iN	In November 2025, the company inaugurated 180 kW ultra-fast charging network and has committed to set up 1,000 charging points by the end of 2027.
Adani TotalEnergies E-mobility Limited (ATEL)	In May 2025, the company announced that it will continue to invest INR 700–800 million in 2025 and the investments will be for an additional 1,500–2,000 charging points, including the ones which are near the commissioning stage.

Tata Power/Tata Power EZ Charge	In March 2026, it launched its first 180 kW ultra-fast charging station on the Mumbai–Ahmedabad highway, aimed at supporting intercity EV travel.
Tata Power EV Charging Solutions Limited (TPEVCSL)	In May 2026, TPEVCSL, subsidiary of The Tata Power Company Limited, announced collaboration with the Indian Oil Corporation Limited (IOCL) to expand EV charging infrastructure along the Delhi-Mumbai Expressway. As a part of this collaboration, TPEVCSL has established ultra-fast EV charging stations at the 63 and 69 milestones on the Haryana stretch of the expressway.
Tecso Charge Zone Limited/ChargeZone	It plans to set up over 1,000 fast-charging stations across major national highway corridors by March 2027 comprising capacities ranging from 500 kW to 1.5 MW.
Ujoy Technologies Private Limited/Bolt.Earth	Bolt.Earth partnered with ChargeZone in June 2026 to enable interoperability between the two companies' charging networks, giving users access to 1,500+ fast-charging locations across India.

Note: Selected initiatives available in the public domain have been considered for selected major players.

Brand names are in italics.

Source: Company press releases, news sources

Outlook

India's EV market is expected to expand significantly, creating substantial long-term opportunities for CPOs, as the government has set a target of 30% EV penetration for total new vehicle sales by 2030. According to a report by the India Energy Storage Alliance (IESA), prepared by Customized Energy Solutions (CES), annual EV sales could increase 12-fold to 30.4 million units by 2032 under the high-growth National EV (NEV) scenario, supported by stronger policy measures, localisation, and charging infrastructure expansion¹⁷. Some industry estimates also project 50 million EVs on Indian roads by 2030, implying a significant increase in charging demand and infrastructure requirements¹⁸.

According to a 2023 report, CII estimates that India could require 1.32 million EV charging stations by 2030¹⁹, based on a planning ratio of one charger for

every 40 EVs (this is to be interpreted as charging points/chargers rather than distinct physical charging locations). Government support is expected to remain an important catalyst, with INR 20 billion allocated under PM E-DRIVE for public charging infrastructure, including support for charging stations across cities and highways. Rising fuel prices, a widening range of electric SUVs and a strong pipeline of new launches are expected to further support EV adoption and charging demand. As the market expands, CPOs are likely to increasingly focus on fast-charging corridors, high-traffic locations, interoperability, reliability, and higher charger utilisation to improve station economics. Operators with strong site networks, efficient power management, and differentiated customer offerings are likely to be better positioned to capture the growing charging opportunity.



¹⁷ ET Auto, July 2026

¹⁸ Pulse Energy, October 2025

¹⁹ India Brand Equity Foundation (IBEF), May 2026

ABOUT RUBIX

Rubix Data Sciences Pvt. Ltd. helps you to take prudent credit risks, build a robust supply chain and monitor compliance for your business partners in India and around the world. Rubix helps you collect payments in time from your debtors, helping generate predictable cash flows.

Set up by highly experienced Risk Professionals, the company has been recognised at the IMC Digital Technology Awards in 2020 for the Rubix ARMST[™] platform, and in 2021 for the Rubix Early Warning System (EWS). Rubix has also received the prestigious ET BFSI Exceller Award three times in a row: in 2023 for its ground-breaking analytics initiative, 'SME Income Range Estimation and Financial Ratio Benchmarking', in 2024 for the Rubix Risk Scoring Model, and in 2025 for Rubix Nexus Check.

Rubix has been appointed as India's first Validation Agent for the Legal Entity Identifier (LEI) by Legal Entity Identifier India Ltd, the Local Operating Unit accredited by the Global Legal Entity Identifier Foundation (GLEIF), Switzerland.

The Rubix ARMST[™] and Early Warning System (EWS) platforms and their suite of reports, products and services are based on Rubix's extensive database of structured and unstructured data aggregated from over 120+ sources, customised predictive analytics and proprietary technology.

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ABOUT VAYANA

Vayana, India's Most Trusted Trade Credit Infrastructure, offers trade credit and trade-enablement solutions across all supply chain tiers.

Vayana has financed over USD 62 billion to date, serving 400,000+ enterprises and 1500 corporates. Vayana connects corporates with their trade ecosystems to provide timely & affordable access to trade credit for payables and receivables. Its proprietary technology has processed 10 million+ transactions across 2,000+ PIN codes in India.

As India's Largest GST Facilitator, Vayana enables GST, E-Way bill filing, and E-invoicing for corporates and MSMEs. It has processed 11 billion+ API calls with zero downtime.

Through Rubix Data Sciences, a Vayana Group Company, it helps businesses Assess Credit, supplier, and counterparty risks. The Rubix ARMST[™] platform supports credit flow to deep supply chain tiers, including MSMEs.

Vayana BillsToPay, an enterprise solution, automates the fetching, digitization, and payment of B2B utility bills across multiple billers and locations

Vayana TradeXchange pioneered the operationalization of International Trade Finance Services at GIFT City in accordance with IFSCA guidelines.

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