

Printed from

**THE TIMES OF INDIA**

# Navigating the obstacles of scaling EV charging infrastructure in India

TIMESOFINDIA.COM | Dec 12, 2023, 03.48 PM IST



*This article is authored by Devendra Chawla, CEO & MD of GreenCell Mobility*

In the dynamic terrain of modern transport, electrification of mass mobility emerges as a revolutionary journey, promising a sustainable and environmentally sensitive future. Electric vehicles (EVs) serve as catalysts for change, providing cleaner alternatives to traditional modes of transportation. However, the widespread adoption of electric mass mobility is contingent on finding answers to the complicated difficulties of charging infrastructure.

As of Oct 2023, India boasted over ~3.0 million registered electric vehicles, a noteworthy step towards a greener era of transportation. However, the success of the electric revolution is

dependent on negotiating the complex environment of charging infrastructure challenges, which is a shift from regular petrol stations. The need for a comprehensive charging infrastructure becomes even more pressing given that the transportation industry accounts for roughly 10-14% of India's greenhouse gas emissions. As a result, the establishment of a broad and accessible charging network is not only a choice but a key national need. It does not end there. What's also important is setting the foundation and developing an ecosystem around the infrastructure as well, which stretches across human resources, sources of energy and other operational requirements.

The current EV scenario in India is unquestionably promising, with a diverse set of activities and investments fuelling growth. Through schemes like as FAME I and II, the government is actively guiding the expansion of EV

charging infrastructure. Private companies play an equal part in the development of India's EV ecosystem.

However, the path to widespread EV adoption is not without obstacles. These obstacles range from high upfront investment for fast charging stations, lack of standardisation in charging guns (inter-operability), grid capacity & stability, non-uniform electricity supply codes across states & UTs, significant processing time & capital for new electrical connections, land acquisition & zoning, addressing accessibility gaps in smaller towns, reducing range anxiety and overcoming congestion issues at metropolitan charging stations.

Most EVs are 2-wheelers, 3-wheelers or cars which are usually charged overnight at home or at parking lots. While India has made progress with approx. 8,000 public charging stations (PCS) (~15,000 charging guns) installed as of Oct 2023, difficulties remain for when there is a need for a publicly available charger during daytime.

A cooperative collaboration between public and private institutions is critical for India to achieve a smooth and sustainable transition to electric mobility. To serve the different needs of a growing EV landscape, a sophisticated strategy is required and we, at GreenCell Mobility, are leading the efforts on that front. The development of fast-charging stations in metropolitan areas is critical to handle the rapid top-ups required by busy urbanites. On highways, ultra-fast charging becomes vital for long travels, making range anxiety a thing of the past. Strategically placed public charging stations are the lifeblood of urban residents and tourists alike, boosting convenience and increasing the reach of EV adoption.

Furthermore, the importance of home charging options cannot be emphasised. Many EV owners prefer the convenience of charging their vehicles at home, especially at night when the vehicles are not in use. Encouragement of home charging stations, particularly in multi-story complexes through Resident Welfare Associations (RWAs), necessitates careful government regulations and incentives.

In conclusion, India is at a crossroads in its march towards mass EV integration. The charging infrastructure, which is often the unsung hero in this story, requires immediate attention. As we negotiate this complicated terrain, the combination of insightful policies, strategic investments, and collective will may propel India towards an electric tomorrow—a future where sustainable mobility is not simply an option but a way of life.

Disclaimer: Views and opinions expressed in this article are solely those of the original author and do not represent any of The Times Group or its employees.