

Sparse EV-charging network stumbles on strategy, state support

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New Delhi, 5 November

Economics, or the lack of it for electric vehicle (EV) charging infrastructure in India, is often seen as the key reason behind India's sparse public charging network. But slipping under the radar are smaller but equally critical concerns relating to the government's role in promoting public charging stations (PCS), the importance of placement, and the quality of the network. The contrast between Karthikeyan Palani-samy's Zeon Charging network and the Kerala state utility's PCS expansion programme reflects the role of strategic planning in building public charging infrastructure.

Zeon has a charging footprint of 160 chargers across 100 locations in South India while the KSEB, Kerala's state utility, is installing nearly 250 fast chargers at 62 PCS across the state, which is only second to Delhi in EV sales.

Zeon uses a connector called CCS2, the backbone of Europe's PCS, in its

chargers. KSEB's chargers, on the other hand, mainly comprise of an old Chinese standard called GB/T, hardly supported by new EVs, industry sources said.

"All of our locations are high quality and strategically located with high quality amenities and a lot of restaurants, restrooms and such," said Karthikeyan. He has categorised his units as destination chargers — slower 22 Kw units used in malls, hotels or resorts where the user is not pressed for time. Zeon's main business is led by imported chargers located

on highways for transit users — fast DC units up to 120 Kw. India's biggest tender for 7,432 chargers led by state oil companies, despite unreliable operations of existing ones installed under the FAME II

subsidy scheme, is yet another instance of quantity trumping quality, and charging economics.

The proposed PCS will come up at existing retail outlets, most of which lack basic amenities, and are designed to charge every vehicle type. Little thought has gone into matching consumer needs



WHAT'S THE HURDLE?

▶ **Chargers installed** under FAME-II marred with unreliable operations

▶ **Proposed public charging stations (PCSs)** to come up at retail outlets that lack basic amenities

▶ **India has less than 3%** of the EU's PCS network

▶ **But PCSs received only 15%** of FAME-II subsidy's ₹10,000 crore

▶ **Most of the subsidy** is reserved for buying EVs

with PCS, something that drives usage, industry officials said. The tender rewards the lowest cost bidder, which tells on the quality of charging equipment. Customers have often complained on social media that many of the existing chargers at state oil retailers don't work. Also, installing PCS at existing pumps makes little sense because motorists have little to do in the hour when the vehicle gets charged.

Planning is critical for the success of PCS, said Rahul Walawalkar, president, India Energy Storage Alliance. He said

that PCS' are often deployed in locations less frequented by motorists, or, placed in such a way, denying proper access.

Zeon uses imported chargers made by ABB, said Karthikeyan, and claimed an uptime of 95 per cent across his network, and 10 per cent utilisation.

"It's putting down the right infrastructure in terms of electrical equipment and cabling and having a competent team on the ground to attend to troubleshooting," he said. EV motorbike startup Raptee's chief executive officer (CEO) Dinesh Arjun, a frequent user of Zeon's network,

said he has hardly come across a misfiring charger on his trips to Bengaluru from Chennai. Arjun, who trusts EV networks by Shell and Zeon to charge his Tata Nexons, attributes their reliability to the quality of charging equipment.

India has less than 3 per cent of the EU's PCS network, but received only 15 per cent of FAME-II EV subsidy scheme's ₹10,000-crore budget.

Most of the subsidy is reserved for buying EVs, a classic case of putting the cart before the horse, an industry official said. That compares with a US programme to distribute up to \$5 billion in funds from 2022-2026 for an EV charging network of 500,000 chargers. Across the Atlantic, the European Commission agreed with the European Investment Bank to make over euro 1.5 billion available by the end of 2023 to build alternative fuel infrastructure. "PCS is a viable business only for cash-rich companies, who can afford to burn cash," said EV charging startup Volttic's CEO Varun Chaturvedi. He bets on fleets, where usage can average 30-35 per cent levels. Even at 10 per cent usage, a PCS is used for only two

hours a day, Chaturvedi said. Volttic has over 600 chargers across India. Tariffs cannot exceed ₹25 per kilowatt hour, leaving only around ₹10-12/unit, after deducting power costs, to cover high capital spends, land rentals and cost of manpower and software, Chaturvedi said.

More than half the cost of a PCS is devoured by supporting upstream infrastructure, government data shows. This infra includes distribution transformers, low and high tension cables, AC distribution boxes, circuit breakers/isolators, protection equipment, tubular or PCC mounting structures, fencing and civil work. EV financier Mufin Green Finance's CEO Pankaj Gupta said apps can help build consumer confidence in electric vehicles. TelioEV, a provider of software solutions to charging companies, has built an aggregator Discovery App. Here, it has over 11,000 charging points of different operators, most of which use Telios software services. But progress is slow with outside charging companies, which refuse to share customer information to aggregators, said company chief technology officer (CTO) Mukesh Bansal.

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