

₹1.05-lakh cr needed for EV charging infra in 10 years'

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India will require about 63,000 charging stations and cumulative investments of ₹26,900 crore for setting them up over the next five years to cater to the growing demand for power for operating electric vehicles (EV).

In the next decade, in line with growth in EV sales, the country could need 2,30,000 charging stations, entailing a total investment of ₹1.05 lakh crore by FY32, said a report by India Ratings and Research. Per government data, there are about 1,000 commercial charging stations in the country in FY22.

The total demand for EVs

WHAT'S NEEDED

- In line with growth in EV sales, the country would need 2.3 lakh charging stations in the next decade
- With expenses such as chargers, electricity connection, civil works, land rentals (Mumbai rates), and software, the total cost of a station works out to ₹35.5 lakh

in the country could grow at a CAGR of 39 per cent in 10 years, the report said.

The EV penetration for the overall automobile industry is expected to reach 40 per cent by FY32 from about 4 per cent in FY23. The proliferation of commercial EV charging stations, which provide plug-in chargers on the road, would play a pivotal role in EV penetration.

A typical public charging station, comprising a slow charger of 3 kwh power, two medium chargers of 20 kwh power, and two fast chargers of 60 kwh power, requires a capital investment of ₹20,40,000 (3 kwh=10,000, 2x20 kwh=2 lakh and 2x60 kwh=18 lakh). With other expenses such as electricity connection, civil works, land rentals (Mumbai rates), and

software, the total cost will work out to ₹35.5 lakh. The costs are estimated to go up in line with inflation as well as demand pick-up in the EV industry.

The proliferation of charging stations would lead to growth of charging station manufacturers as well as charging station operators (CSO). Charging station manufacturers would be responsible for providing complete charging point solutions for public and private charging, including hardware and software installation, maintenance of the hardware, and additional support services.

Some of the major charging infrastructure manufac-

turers are Delta Electronics Inc, ABB India Ltd, Exicom Power Solutions Ltd, and Okaya Power Ltd. CSOs would be responsible for operating a network of chargers, which includes EV electric vehicle charging, customer support, and network solutions (standalone or in partnership with a network service provider).

Meanwhile, the Union Ministry of Power has categorised EV charging as a service, and thus, the charging station providers would not need licensing under the Electricity Act, 2003. Some of the companies that offer CSO services are Energy Efficiency Services, Tata Power and Magenta Group.