

India takes 'standardised' road to charge up EVs

NITIN KUMAR

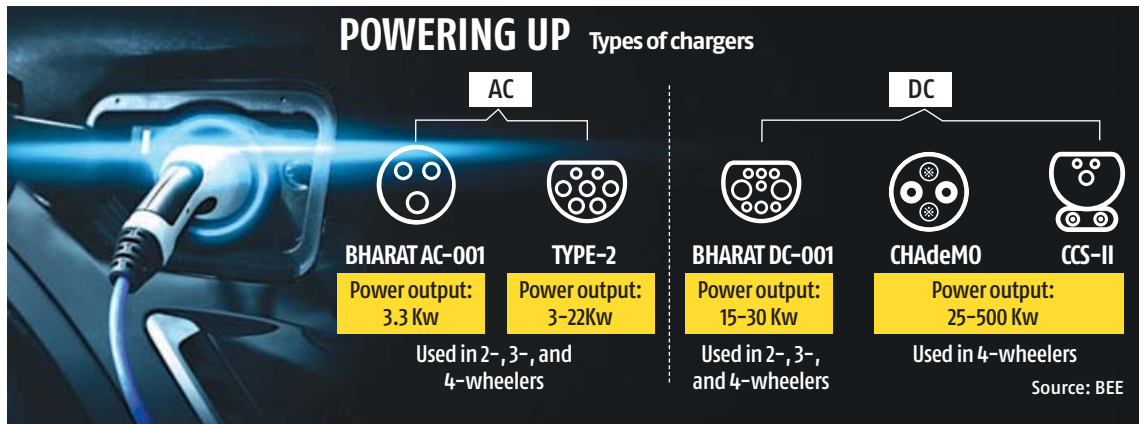
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In response to the burgeoning electric vehicle (EV) sector in India, the government is preparing to introduce a standardised charging protocol, Business Standard has learnt. This move is a reaction to concerns voiced by major industry stakeholders about the absence of uniformity in charging infrastructure, which has resulted in interoperability issues.

"The objective is to establish uniform standards for the entire EV industry," a senior government official said. "The proposal is to introduce either a single charging standard applicable to all types of EVs or, alternatively, two standards — one for two- and three-wheelers and another for four-wheelers."

The official further said that the broader consensus leans towards the latter option.

The implementation of a universal



charging standard by the government would allow users to charge their EVs at any available charging station nationwide. At present, EVs with specific charging standards can only be charged at stations that adhere to those particular standards.

According to the Bureau of Energy

Efficiency (BEE), a government agency under the Ministry of Power tasked with developing policies and strategies that emphasise self-regulation and market principles, the country currently uses two categories of alternating current (AC) chargers — slow or moderate — namely Bharat AC-001 and Type-2.

Additionally, there are three types of direct current (DC) fast chargers: Bharat DC-001, "CHArge de MOve (CHAdeMO)", and Combined Charging System (CCS-II).

Each of these chargers exhibits distinct dimensional incompatibility. For instance, a vehicle equipped with

CCS-II charging capabilities cannot connect to a Bharat DC-001 charger due to differences in the size and shape of the charging gun, and vehicle connector, despite sharing the same power output.

While there is some degree of standardisation in the four-wheeler segment's charging infrastructure, the charging infrastructure is highly fragmented for two- and three-wheelers. Original equipment manufacturers (OEMs) have the liberty to design chargers as they see fit, as long as they adhere to the power standards set by the government. Most electric two- and three-wheelers use AC charging, governed under the IS 17017 standard.

As electric two- and three-wheeler OEMs rush to seek approval for their unique connector standards from the BIS (Bureau of Indian Standards), the government is concerned about granting approval to all manufacturers as they may lead to market confusion.

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On October 18, Ather Energy announced the BSI's approval for its initial integrated AC and DC connector, making it available for potential adoption by other OEMs. "The idea of standardised charging norms is gaining global acceptance, with multiple countries embracing this concept. As India targets a 30 per cent EV penetration by 2030, standardisation can play a pivotal role in helping the nation realise this ambitious goal," said another government official.

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