

**GOVERNMENT OF INDIA
MINISTRY OF POWER**

**LOK SABHA
STARRED QUESTION NO.254
ANSWERED ON 12.12.2024**

INSTALLATION OF EV CHARGING INFRASTRUCTURE

***254. SHRI JAGADISH SHETTAR:
SHRI BIBHU PRASAD TARAI:**

**Will the Minister of POWER
be pleased to state:**

- (a) whether the Government proposes to standardize the charging infrastructure, vehicle charging and battery swapping for Electric Vehicle (EV) across the country and if so, the details thereof;**
- (b) the details of the guidelines issued regarding "Installation and Operation of EV charging Infrastructure-2024" to support nationwide connected EV charging infrastructure;**
- (c) the number of charging stations proposed to be set up in the country during the coming years, State/UT-wise; and**
- (d) whether the Government has any plans to include private sector for installation and operation of EV charging infrastructure and if so, the details thereof?**

A N S W E R

THE MINISTER OF POWER

(SHRI MANOHAR LAL)

(a) to (d) : A Statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (d) IN RESPECT OF LOK SABHA STARRED QUESTION NO. 254 FOR REPLY ON 12.12.2024 REGARDING INSTALLATION OF EV CHARGING INFRASTRUCTURE ASKED BY SHRI JAGADISH SHETTAR AND SHRI BIBHU PRASAD TARAI

(a) & (b) : Development of standards for electric mobility is an ongoing process. So far, Bureau of Indian Standards (BIS) has published 21 standards for charging Infrastructure and 9 standards for Electric Vehicles (EVs) and battery. These standards also include safety standards. The details are at Annexure.

Ministry of Power has issued “Guidelines for Installation and Operation of Electric Vehicle Charging Infrastructure-2024” on 17th September 2024 to facilitate the EV charging infrastructure network in the country. The salient features of the above mentioned guidelines are as follows:

- i. To facilitate electricity connection for EV charging stations, timelines have been specified. Owners of EV charging stations may opt for Low Tension (LT) connection for loads up to 150 kW.**
- ii. To provide land at affordable prices to government / public entities and through revenue sharing model to any entity for setting up of public EV charging stations.**
- iii. Tariff for supply of electricity to EV charging stations has been simplified. It has been advised to make tariff single part and limited to "Average Cost of Supply" till 31st March 2028.**
- iv. Residential owners may use existing electricity connections for EV charging or may opt for a separate metered connection from Distribution Licensee with a dedicated EV charging tariff.**
- v. To promote charging through solar energy, charging during solar hours (9 a.m. to 4 p.m.) has been incentivized.**
- vi. Service fee charged by a public and community EV charging station from a customer has been rationalized.**

vii. Use of open communication protocols like Open Charge Point Protocol (OCPP), Open Charge Point Interface (OCPI) and Unified Energy Interface (UEI) to create connected and interoperable EV charging infrastructure has been encouraged.

(c) : Installation and operationalization of Charging Infrastructure is a focus area of PM e-DRIVE (Electric Drive Revolution in Innovative Vehicle Enhancement). With the allocation of Rs. 2,000 Cr (18% of total allocation), it proposes to support 72,300 public charging stations (48,400 for e-2W & 3W, 22,100 for e-4W and 1800 e-buses) and instil confidence among EV users. The scheme will be implemented through involvement of Central Ministries/authorities, State Govts, Central Public Sector Enterprises (CPSEs), etc. In addition to setting up of EV charging infrastructure within city limits, the scheme also envisages selected inter-city/inter-state highways to be made EV ready.

(d) : As per the aforementioned guidelines, all entities, including private entities are allowed to install and operate EV charging stations. As on 30.11.2024, a total number of 25,202 Public Charging Stations have been installed by public and private entities.

**ANNEXURE REFERRED TO IN PARTS (a) & (b) OF THE STATEMENT LAID IN
REPLY TO STARRED QUESTION NO. 254 ANSWERED IN THE LOK SABHA ON
12.12.2024 REGARDING INSTALLATION OF EV CHARGING INFRASTRUCTURE**

Published standards for charging infrastructure (21)

S. no.	IS Number	Title
1	<u>IS/ISO 15118-1 : 2013</u>	Road vehicles - Vehicle to grid communication interface: Part 1 general information and use - Case definition
2	<u>IS/ISO 15118-2 : 2014</u>	Road vehicles - Vehicle - To - Grid communication interface: Part 2 network and application protocol requirements
3	<u>IS/ISO 15118-3 : 2015</u>	Road vehicles - Vehicle to grid communication interface: Part 3 physical and data link layer requirements
4	<u>IS/ISO 15118-5 : 2018</u>	Road vehicles - Vehicle to grid communication interface: Part 4 network and application protocol conformance test
5	<u>IS/ISO 15118-2 : 2014</u>	Road vehicles - Vehicle to grid communication interface: Part 5 physical layer and data link layer conformance test
6	<u>IS/ISO 15118-8 : 2020</u> <u>ISO 5400:1984</u> <u>ISO 5400:1984 (First Revision)</u>	Road Vehicles - Vehicle to Grid Communication Interface Part 8: Physical Layer and Data Link Layer Requirements for Wireless Communication (First Revision)
7	<u>IS 17017 (Part 1) : 2018</u>	Electric Vehicle Conductive Charging System Part 1 General Requirements
8	<u>IS 17017 (Part 2/Sec 1) : 2020</u>	Electric Vehicle Conductive Charging System Part 2 Plugs, Socket-Outlets, Vehicle Connectors, and Vehicle Inlets Section 1 General requirements
9	<u>IS 17017 (Part 2/Sec 2) : 2020</u>	Electric Vehicle Conductive Charging System Part 2 Plugs, Socket - Outlets, Vehicle Connectors and Vehicle Inlets Section 2 Dimensional compatibility and interchangeability requirements for a.c. pin and contact-tube accessories
10	<u>IS 17017 (Part 2/Sec 3) : 2020</u>	Electric Vehicle Conductive Charging System Part 2 Plugs, Socket - Outlets, Vehicle Connectors and Vehicle Inlets Section 3 Dimensional compatibility and interchangeability requirements for d.c. and a.c./d.c. pin and contact-tube vehicle couplers
11	<u>IS 17017 (Part 2/Sec 6) : 2021</u> <u>ISO 622 : 2016</u> <u>ISO 622 : 2016</u>	Electric Vehicle Conductive Charging System Part 2 Plugs, Socket-Outlets, Vehicle Connectors and Vehicle Inlets Section 6 Dimensional compatibility requirements for DC pin and contact-tube vehicle couplers intended to be used for DC EV supply equipment where protection relies on electrical separation

12	<u>IS 17017 (Part 2/Sec 7) : 2023</u>	Electric Vehicle Conductive Charging System Part 2 Plugs, Socket-Outlets, Vehicle Connectors and Vehicle Inlets Section 7 Dimensional Compatibility and Interchange Ability Requirements for a.c., d.c. and a.c./d.c. Pin and Contact-Tube Vehicle Couplers Intended to be used for a.c./d.c. EV Supply Equipment where Protection Relies on Electrical Separation
13	<u>IS 17017 (Part 21/Sec 1) : 2019</u> <u>IEC 61851-21-1 : 2017</u> <u>IEC 61851-21-1 : 2017</u>	Electric Vehicle Conductive Charging System Part 21 Electromagnetic Compatibility (EMC) Requirements Section 1 On-board chargers
14	<u>IS 17017 (Part 21/Sec 2) : 2019</u> <u>IEC 61851-21-2 : 2018</u> <u>IEC 61851-21-2 : 2018</u>	Electric Vehicle Conductive Charging System Part 21 Electromagnetic Compatibility (EMC) Requirements Section 2 Off-board chargers
15	<u>IS 17017 (Part 22/Sec 1) : 2021</u> <u>ISO 21084 : 2019</u> <u>ISO 21084 : 2019</u>	Electric Vehicle Conductive Charging Systems Part 22 AC Charging Configurations Section 1 - AC Charge Point for Light Electric Vehicle
16	<u>IS 17017 (Part 23) : 2021</u> <u>ISO/IEC 11160-1:1996</u> <u>ISO/IEC 11160-1:1996</u>	Electric Vehicle Conductive Charging Systems Part 23 dc Electric Vehicle Supply Equipment
17	<u>IS 17017 (Part 24) : 2021</u> <u>ISO/IEC 18000-64:201</u>	Electric Vehicle Conductive Charging System Part 24 : Digital Communication between a DC Electric Vehicle Supply Equipment and an Electric Vehicle for control of DC Charging
18	<u>IS 17017 (Part 25) : 2021</u> <u>ISO 6658:2017</u> <u>ISO 6658:2017</u>	ELECTRIC VEHICLE CONDUCTIVE CHARGING SYSTEM Part 25: DC EV supply equipment where protection relies on electrical separation
19	<u>IS 17017 (Part 31) : 2024</u>	ELECTRIC VEHICLE CONDUCTIVE CHARGING SYSTEM Part 31: ac or dc EV supply equipment for where protection relies on electrical separation
20	<u>IS 17896 (Part 1) : 2022</u> <u>62751-</u> <u>2:2014+AMD1:2019CSV</u> <u>62751-</u> <u>2:2014+AMD1:2019CSV</u>	Electric vehicle battery swap system - Part 1: General and Guidance
21	<u>IS 17896 (Part 2) : 2022</u> <u>62823-</u> <u>:2015+AMD1:2019CSV</u> <u>62823-</u> <u>:2019+AMD1:2019CSV</u>	Electric vehicle battery swap system - Part 2: Safety requirements
	<u>ETD 51 Standard under development (1)</u>	
	<u>ETD/51/21658</u>	Electric Vehicle Conductive Charging System Part 30 Dual Gun DC EVSE

Standards for Electric Vehicle and Battery (9)

S. no.	IS Number	Title
1	IS 15886 : 2010 Revised In : 2017	Road Vehicles â€” Battery Operated--Vehicles â€” Code Of Practice
2	IS 17191 (Part 1) : 2019 Revised In : 2024	Electric Power Train Vehicles Part 1 Measurement of Electrical Energy Consumption
3	IS 17191 (Part 2) : 2019 Revised In : 2024	Electric Power Train Vehicles Part 2 Method of Measuring the Range
4	IS 17191 (Part 3) : 2019	Electric Power Train Vehicles Part 3 Measurement of Net Power and the Maximum 30 Minute Power
5	IS 17855 : 2022 TR 63262 : 2019 TR 63262 : 2019	Electrically propelled road vehicles - Test specification for lithium-ion traction battery packs and systems - Part 4: Performance testing
6	IS 18073 : 2023	Electric Traction Motor - Performance and Functional Requirements
7	IS 18294 : 2023	Electric Rickshaw E-Kart Construction and Functional Safety Requirements Specification
8	IS 18590 : 2024	Electric Power Train of L Category Vehicles Specific Requirements
9	IS 18606 : 2024	Electric Power Train of M and N Category Vehicles Specific Requirements
