

GOVERNMENT OF INDIA
MINISTRY OF HEAVY INDUSTRIES
RAJYA SABHA
UNSTARRED QUESTION NO. 2034
ANSWERED ON 17.03.2023

INITIATIVES TO IMPROVE BATTERY TECHNOLOGY

**2034. DR. AMAR PATNAIK:
SHRI MOHAMMED NADIMUL HAQUE:**

Will the Minister of **Heavy Industries** be pleased to state:

- (a) whether Government has taken initiatives to improve battery technology and to eradicate the challenges and adoption barriers for the EV industry;
- (b) if so, the details thereof, and if not, reasons therefor;
- (c) whether Government has made any Public-Private Partnerships (PPP) in FY 2022-23 to improve the infrastructure for public EV-charging stations for four wheelers;
- (d) if so, details thereof, and if not, reasons therefor;
- (e) whether Government has developed Battery Swapping Policy for increased efficiency in the EV eco-system; and
- (f) if so, the details thereof and if not, the reasons therefor?

**ANSWER
THE MINISTER OF STATE FOR HEAVY INDUSTRIES
(SHRI KRISHAN PAL GURJAR)**

(a) to (d): Sir, Ministry of Power on 13.04.2018 issued clarification on Charging Infrastructure for Electric Vehicles with reference to the provisions of the Electricity Act, 2003. It has been clarified that during the activity of charging of battery for use in electric vehicles, the charging station does not perform any of the activities namely transmission, distribution or trading of electricity, which require license under the provisions of the Act (vis-à-vis Section 12 of Electricity Act, 2003), hence the charging of batteries of electric vehicles through charging station does not require any license under the provisions of Electricity Act, 2003. Ministry of Power is mandated only for Charging Infrastructure for Electric Vehicles and has issued revised consolidated Guidelines & Standards for the same on 14.01.2022 (amended on 07.11.2022). The details may be seen at the website of Ministry of Power [powermin.gov.in].

The key features of the “Charging Infrastructure for Electric Vehicles – the revised consolidated Guidelines and Standards” are as below:

- Tariff for supply of electricity for Public Charging Station (PCS) shall be a single part tariff and shall not exceed “Average Cost of Supply” till 31st March, 2025.
- DISCOMs may leverage on funding from the Revamped Distribution Sector Scheme (RDSS) under ‘Part A – Distribution Infrastructure’ for the general upstream network augmentation necessitated due to the upcoming charging infrastructure in various areas. The cost of such works carried out by the DISCOMs with the financial assistance from Government of India under Revamped Scheme shall not be charged from the consumers for Public Charging Stations for EVs.

PTO

- Housing societies, Malls, Office Complexes, Restaurants, Hotels, etc. are allowed to install PCS for charging of vehicles including charging of visitor's vehicles permitted to come in its premises.
- Charging stations meant for 100% in-house/captive utilization are free to choose charging specifications as per requirement.
- DISCOMs have been directed to provide electricity connection to Public Charging Station (PCS) in accordance with the timelines specified in the "Electricity (Rights of Consumers) Rules 2020".
- The connection for a PCS shall be provided within 7 days in metro cities, 15 days in other municipal areas and 30 days in rural areas. Appropriate Commission may specify a lesser time limit than the aforementioned limit.
- Any PCS/chain of charging station may also obtain electricity from any generation company through open access. Open access shall be provided within 15 days for this purpose. Only cross subsidy charges (not more than 20% as per Tariff Policy Guidelines), transmission charges and wheeling charges shall be applicable.
- Guidelines also include the details of requirements of Public Charging Infrastructure (PCI), PCI for long range EVs and/or heavy duty EVs, Location of PCS, Database of Public EV charging stations, Tariff for supply of electricity to EV PCS and service charge at PCS.
- Due to high cost of rent for land and chargers, provisions of land at promotional rates for PCS have been provided in the Guidelines. Land available with Government/Public entities shall be provided to Government/Public entity on a revenue sharing basis at a fixed rate of Rs.1/kWh (used for charging) to be paid to the land owning agency, initially for a period of 10 years.

Further, The Government on 12th May, 2021 approved PLI Scheme for manufacturing of ACC in the country with a budgetary outlay of Rs. 18,100 crore. The scheme envisages to establish a competitive ACC battery manufacturing set up in the country for 50 GWh. Additionally, 5GWh of niche ACC technologies is also covered under the Scheme.

(e) & (f): Sir, NITI Aayog has uploaded a draft policy on their website for stakeholders' consultation for implementing the battery swapping policy. With battery swapping policy, faster adoption of EVs will take place which will increase public confidence in EVs.

Battery swapping is generally used for smaller vehicles such as 2Ws and 3Ws with smaller batteries that are easier to swap, compared to 4 wheelers and e-buses, although solutions are emerging for the latter segments as well. Battery swapping offers three key advantages relative to charging: it is time, space, and cost efficient, provided each swappable battery is actively used.
