

GOVERNMENT OF INDIA
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY
LOK SABHA
STARRED QUESTION NO. *327
TO BE ANSWERED ON: 18.12.2024

EV SUB-SYSTEMS

***327. SMT. APARAJITA SARANGI:
SHRI PRAVEEN PATEL:**

Will the Minister of Electronics and Information Technology be pleased to state:

- (a) the specific areas where innovations have been proposed by the Government to enhance/encourage the development of Electric Vehicle (EV) sub-systems;
- (b) the manner in which this initiative promotes/encourages indigenous technologies in the electric vehicle sector and contributes to the vision of Atmanirbhar Bharat ;
- (c) whether the Government proposes to promote Research and Development (R&D) for development of sub-systems such as EV batteries, charging infrastructure and motor controllers and if so, the details thereof;
- (d) the schemes implemented by the Government to provide financial assistance and subsidies for EV sub systems so far;
- (e) whether any special fund has been set up by the Government to provide financial assistance to startups and MSMEs in EV related sectors and if so, the details thereof; and
- (f) whether the Government proposes to accelerate development of EV infrastructure through partnership between public and private sectors and if so, the details thereof?

ANSWER

MINISTER FOR ELECTRONICS AND INFORMATION TECHNOLOGY
(SHRI ASHWINI VAISHNAW)

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

**STATEMENT REFERRED TO IN THE REPLY TO LOK SABHA STARRED QUESTION
NO. *327 FOR 18.12.2024, REGARDING EV SUB-SYSTEMS**

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(a) to (f): Electric Vehicles (EVs) provide a range of environmental to economical benefits over conventional vehicles. To promote development of indigenous technologies and thereby strengthen the local manufacturing base, Ministry of Electronics and Information Technology (MeitY) has initiated a **Research & Development (R&D) programme** to encourage the development of **Electric Vehicles Sub-Systems (EVSS)** in the areas of:

- Electric Motor
- EV Chargers (AC/DC)
- DC-DC Converters
- Controller
- Battery Management Systems (BMS)

In the proposed programme, financial support is provided to academia, R&D organizations and industries including Startups & MSME to carry out R&D activities for the development of EV sub-systems.

In October 2024, MeitY in association with Ministry of Heavy Industries (MHI) has invited proposals through a Joint Call for Proposal for the R&D of EV sub-systems. Major R&D areas identified in the **MeitY-MHI Joint Call for Proposal** include development of Electric Motor Drive Trains, EV Chargers (AC/DC), Converters, Controllers and Battery Management Systems (BMS) with safety and intelligence.

Salient Features of the Call for Proposal are:

- MeitY provides financial support as grant-in-aid to carry out R&D activities for the development of EV sub-systems.
- MHI supports the testing and certifications of the developed technologies as per the standards alongwith the propagation of these technologies.
- The proposals have been invited in a consortium mode involving academic institutes/ R&D organization for the design and development, Product development agency (PDA) to support the development of the product, industry to commercialize it and vehicle manufacturer to use the developed products in their regular manufacturing.
- Minimum upfront contribution of 20% of the project outlay will be borne by the participating industry partner. This multi-stakeholder model is being followed to accelerate the commercialization of the indigenous development of EV sub-system technologies.

MeitY is also promoting Research and Development (R&D) for development of sub-systems such as rechargeable battery cell manufacturing technology for EV batteries. A Centre of Excellence (CoE) has been set up at C-MET, Pune, an R&D society of MeitY, for the design and development of Lithium-ion battery (LIB), Sodium-ion battery (SIB), and Li-polymer battery cell technologies.

Department of Science and Technology (DST) is supporting Research and Development in the EV domain through the following scheme:

- Mission for Advancement in High Impact Areas in Electric Vehicle (EV) components with focus on Battery Cells, Power Electronics, Machines, Drives and Charging Infrastructure. A call for proposal has already been launched.
- NIDHI Seed Support Program which provides financial support to startups through the (NIDHI-SSP), helping them scale their innovations into successful ventures, in various sectors including EVs, and batteries, etc.

MHI is supporting R&D in EV in academic institutions under the Capital Goods Scheme.

In addition, MHI has following initiatives to provide **financial assistance/subsidies on EV/EV Sub-Systems**:

- i. **Production Linked Incentive (PLI) Scheme for Automobile and Auto Component Industry in India (PLI-Auto)**: The Government approved this scheme on 23rd September, 2021 for Automobile and Auto Component Industry in India for enhancing India's manufacturing capabilities for Advanced Automotive Technology (AAT) products with a budgetary outlay of Rs. 25,938 Crore. The scheme provides financial incentives to boost domestic manufacturing of AAT products with minimum 50% Domestic Value Addition (DVA) and attract investments in the automotive manufacturing value chain.
- ii. **Faster Adoption and Manufacturing of Hybrid & Electric Vehicles in India (FAME India) Scheme Phase-II**: The Government implemented this scheme for a period of five years from 1st April, 2019 with a total budgetary support of Rs. 11,500 crore. The scheme incentivises e-2Ws, e-3Ws, e-4Ws, e-buses and EV public charging stations.
- iii. **PLI Scheme for Advanced Chemistry Cell (ACC)**: 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 aims to establish a competitive domestic manufacturing ecosystem for 50 GWh of ACC batteries.
- iv. **PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM E-DRIVE) Scheme**: This scheme with an outlay of Rs. 10,900 crore was notified on 29th September 2024. It is a two-year scheme which aims to support electric vehicles including e-2W, e-3W, e-Trucks, e-buses, e-Ambulances, EV public charging stations and upgradation of testing agencies.
- v. **PM e-Bus Sewa-Payment Security Mechanism (PSM) Scheme**: This Scheme notified on 28.10.2024, has an outlay of Rs. 3,435.33 crore and aims to support deployment of more than 38,000 electric buses. The objective of scheme is to provide payment security to e-bus operators in case of default by Public Transport Authorities(PTAs).
- vi. **Scheme for Promotion of Manufacturing of Electric Passenger Cars in India (SPMEPCI)** was notified on 15th March, 2024 to promote the manufacturing of electric cars in India. This requires applicants to invest a minimum of Rs. 4150 crore and to achieve a minimum DVA of 25% at the end of the third year and DVA of 50% at the end of the fifth year.

The initiatives of the Government is ensuring support for the complete ecosystem of EV. The support for R&D to encourage indigenization of EV sub-system technologies/products is expected to enhance domestic manufacturing. Various schemes for incentives and subsidies to promote commercialization and manufacturing of EVs will strengthen the local supply chain in the EV sector. These initiatives of the Government will contribute to the vision of Atmanirbhar Bharat.
