GOVERNMENT OF INDIA
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY
LOK SABHA
UNSTARRED QUESTION NO. 5451
TO BE ANSWERED ON: 25.03.2026

EV POWER ELECTRONICS MANUFACTURING IN TAMIL NADU

5451. THIRU DAYANIDHI MARAN:

Will the Minister of ELECTRONICS AND INFORMATION TECHNOLOGY be pleased to state:

(a) whether the Government has formulated a roadmap for large-scale manufacturing and commercial deployment of the indigenously developed 30 kW Wide Band Gap (WBG) Integrated Drive System for EVs launched in Chennai and the role envisaged for industries in Tamil Nadu;
(b) if so, the details of funding and support provided under the National Mission on Power Electronics Technology (NaMPET) for this project including allocations made to IIT Madras, C-DAC and industry partners;
(c) whether the Government proposes to establish power electronics manufacturing clusters, semiconductor packaging facilities or EV component ecosystems in Tamil Nadu considering its strong automobile and auto-component base;
(d) if so, the steps taken to ensure that MSMEs in Tamil Nadu benefit from localisation opportunities created by this technology; and
(e) whether the Government is likely to extend PLI incentives, R&D grants or infrastructure support to scale up indigenous EV power electronics manufacturing in Tamil Nadu so that import dependence on such critical components is reduced?

ANSWER

MINISTER OF STATE FOR ELECTRONICS AND INFORMATION TECHNOLOGY
(SHRI JITIN PRASADA)

(a) to (e): **Electronics manufacturing in India:**
India has emerged as an important electronics manufacturing nation in last 12 years. Electronics manufacturing has increased 6 times to reach 11.3 Lakh Cr, exports have increased 8 times. India now has a major mobile manufacturing ecosystem. Mobiles have emerged as the topmost export items in 2025.

India has witnessed a remarkable growth in electronics manufacturing in last decade, which is evident from table below:

#	2014-15	2024-25	Remarks
Production of electronics goods (₹)	~1.9 Lakh Cr	~11.3 Lakh Cr	Increased 6 times

Export of electronics goods (₹)	~0.38 Lakh Cr	~3.3 Lakh Cr	Increased 8 times
Production of mobile phones (₹)	~0.18 Lakh Cr	~5.5 Lakh Cr	Increased 28 times
Export of mobile phones (₹)	~0.01 Lakh Cr	~2 Lakh Cr	Increased 127 times

Central Government policies have helped Tamil Nadu:

Tamil Nadu has benefitted significantly through the Central Government's policy to develop electronics manufacturing. As on date, there are 39 electronics manufacturing units in Tamil Nadu approved under various schemes of MeitY.

Government efforts to develop power electronics manufacturing:

Power electronics technologies play a critical role in efficient power conversion and control in several sectors including electric mobility. With the rapid adoption of Electric Vehicles (EVs), there is an increasing need for high-efficiency and compact electric drive systems.

In 2019, Government initiated National Mission on Power Electronics Technology (NaMPET) programme to promote indigenous development of power electronics technologies,

Under this programme, the project titled "Development of WBG based Integrated Drive System for Electric Vehicles (evIDS)" has been approved.

It is being implemented by C-DAC, IIT Madras and industry partner with an outlay of ₹ 3.9 crore. The Expression of Interest (EoI) of 30 kW Wide Band Gap (WBG) based Integrated Drive System (IDS) has been published for Transfer of Technology to industry.

Government of India has undertaken several initiatives to establish EV power electronics manufacturing ecosystems including R&D grants and infrastructure support. The key initiatives are given below:

1. Electronics Component Manufacturing Scheme (ECMS)

To deepen and broaden the electronics manufacturing ecosystem, Government launched the Electronics Components Manufacturing Scheme (ECMS) in April 2025.

The scheme provides financial incentives on domestic manufacturing sub-assemblies such as camera module, display module optical transceivers, key components such as Printed Circuit Boards (PCBs), passive components, electro-mechanical components and capital equipment for electronics manufacturing and its supply chain. These components and sub-assemblies will have cross-sectoral applications such as consumer electronics, telecom, automotive electronics, strategic electronics, medical electronics, industrial electronics etc.

2. Electronics Manufacturing Clusters (EMC)

MeitY has notified the Modified Electronics Manufacturing Clusters (EMC 2.0) Scheme in April 2020 aims to build world-class electronics manufacturing infrastructure, attract investments, create employment and boost the ESDM sector by providing financial support for setting up dedicated clusters with shared infrastructure facilities and amenities.
The Government has approved two (02) greenfield EMC projects in the State of Tamil Nadu – EMC Pillapaikkam and EMC Manallur.

3. Production Linked Incentive (PLI)

The Government has notified the Production Linked Incentive (PLI) Scheme for Automobile and Auto Components Industry in India (PLI-Auto) for enhancing India's manufacturing capabilities for advanced automotive technology (AAT) products (which include power electronics components) with a budgetary outlay of ₹ 25,938 crores on 23.09.2021. As a pan India Scheme, approved applicants may set up their manufacturing units anywhere in the country (including Tamil Nadu).

4. Electric Vehicle Sub-System (EVSS)

MeitY has initiated programme on development of Electric Vehicle Sub-System (EVSS) in March 2022. This programme aims to develop indigenous EV power electronics technologies and sub-systems like motor, controller, converters, chargers etc., through collaboration between academic institutions, R&D organizations and industries in a consortium approach.
Under the programme, projects on development of efficient Traction Motors and controllers for EV passenger cars in Indian market and high-efficiency portable chargers for electric 2W/3W with an outlay of ₹ 9.59 crore has been implemented at Indian Institute of Technology Madras, Research Park with industry participation. The developed technologies may be transferred to industries across the countries including Tamil Nadu for manufacturing and its commercialization to reduce the import dependence.

5. Anusandhan National Research Foundation (ANRF)

EV-Mission of Anusandhan National Research Foundation (ANRF) aims to promote research & development of Electric Vehicle (EV) adoption in India, fostering an ecosystem that enables self-reliance and global competitiveness. This involves research & development in some of the key EV components such as batteries, motors and controllers, power electronics, and related subsystems. The e-nodes were established across all pre-defined technology verticals which includes Tropical EV battery and battery cells; Power Electronics, Machines and Drives (PEMD); and EV charging infrastructure.

ANRF established one of the e-nodes (Rare Earth Magnet-Free Axial Flux Synchronous, Radial Flux Switched Reluctance Motor and their Controllers for EV Applications) initiated in May 2025 for a period of three years. In this e-node, Indian Institute of Technology Madras is involved as partnering institution.

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