GOVERNMENT OF INDIA
MINISTRY OF HEAVY INDUSTRIES AND PUBLIC ENTERPRISES
DEPARTMENT OF HEAVY INDUSTRY

RAJYA SABHA
UNSTARRED QUESTION NO. 4348
TO BE ANSWERED ON 05.04.2018

Manufacturing of electric vehicles

4348. SHRI HARIVANSH:

Will the Minister of HEAVY INDUSTRIES AND PUBLIC ENTERPRISES be pleased to state:

(a) whether it is a fact that Government is giving a lot of emphasis on manufacturing of electric vehicles to fight air pollution and shortage of oil in future;
(b) if so, the steps taken in this regard during the last three years; and
(c) whether any collaboration with any foreign or indigenous company is proposed in this regard?

ANSWER
MINISTER OF STATE IN THE MINISTRY OF HEAVY INDUSTRIES AND PUBLIC ENTERPRISES (SHRI BABUL SUPRIYO)

(a) to (c): With a view to provide impetus to domestic manufacturing of hybrid & electric vehicles (collectively termed as xEVs), the Government of India approved the National Mission on Electric Mobility in 2011 and subsequently National Electric Mobility Mission Plan 2020 was unveiled in 2013. This Mission Plan has been designed mainly considering the Fuel Security and Environmental Pollution in the country.

As a part of this Mission Plan, the Government notified FAME India Scheme [Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India] initially for a period of 2 years commencing from 1st April 2015 & till 31st March 2017, with an outlay of Rs. 795 crore. The scheme is one of the green initiatives of the Government, which is aimed at reducing dependency on fossil fuels. The scheme is being implemented through four focus areas namely Technology Development/R&D; Pilot Projects; Charging Infrastructure and Demand Creation.

Under demand creation focus area, the purchaser of electric / hybrid vehicles (xEVs) is given an upfront reduction in purchase price by the dealer at the time of purchase of xEVs. Since inception of the scheme & till 3rd April 2018, the Government has given financial support (demand incentive) to about 1,95,317 electric/hybrid vehicles.

As per the scheme, specific projects/proposals received under the different focus areas namely Technology Development (R&D); Pilot Projects; Charging Infrastructure are funded by the Government. A statement of such projects approved / sanctioned under the scheme by the Government is given in ANNEXURE-I.

Over the period of time, it has been observed that there has been continuous increase of registration of OEMs and their models. At present, 78 models of 22 OEMs are registered under FAME India Scheme for availing demand incentive.

Further, to give a fresh thrust to e-mobility in public transport, Department of Heavy Industry issued an Expression of Interest for providing financial incentives to million plus cities and special category states for purchase of Electric Buses / Electric Three Wheelers Auto / Electric Four Wheelers and for setting up Charging Infrastructure for public transport and shared electric mobility.

ANNEXURE-I

Projects approved by DHI under FAME India Scheme (Pilot Projects, Charging infrastructure and Technology Development

S.No.	Name of the Project	Name of the Operating Agency
1	Public Fast Charging Infrastructure Network for Electric Vehicles at Bangalore	M/s Mahindra Reva Electric Vehicles Pvt. Ltd. in collaboration with Lithium Urban Technologies Pvt. Ltd.
2	Establishment of Testing Infrastructure for Certification of Testing of Electric & Hybrid Vehicles at ARAI Pune	Automotive Research association of India (ARAI), Pune
3	Proposal for specifications and Finalizing Draft Standards of xEV Charging Stations, ARAI, Pune	Automotive Research association of India (ARAI), Pune
4	Proposal for Charging Infrastructure Management System, IIT Madras	Indian Institute of Technology, Madras
5	Proposal for 25 Hybrid Buses for Bandra Kurla Complex, MMRDA Mumbai	Mumbai Metropolitan Regional Development Authority (MMRDA)
6	Proposal for 25 Electric Buses by HP Government	Himachal Road Transport Corporation (HRTC)
7	Proposal for 50 Nos. Maxi Cabs for local transport by HP Government	Himachal Pradesh City Transport and Bus Stand Management & Development Authority
8	Proposal for putting up of Solar Based Charging Infrastructure for EVs in NCR by REIL, Jaipur	Rajasthan Electronics & Instrumentation Limited (REIL), Jaipur
9	Proposal for putting up of Solar Based Charging Infrastructure for EVs in the premises of Udyog Bhawan by BHEL	Bharat Heavy Electrical Limited (BHEL)
10	Technical Development Project for advanced Gen-IV Lead Acid Battery & Gen-Nickel-Zinc Battery for EVs ***[Development of Ni-Zn Battery (Advanced Battery) for Electric Vehicles***]	Non-Ferrous Materials Technology Development Centre (NFTDC), Hyderabad
11	Proposal for 2 Electric Vehicles (5-7 Seater) for Land Port Authority of India at Agartala	Land Port Authority of India (LPAI)
12	Proposal for Centre of Advanced Research in Electrified Transportation (CARET) at AMU [***Development of Indigenous Chargers (AC/DC/Solar***]	Aligarh Muslim University (AMU)
13	Project for Centre for Battery Engineering	Indian Institute of Technology, Madras
14	Proposal received under IMPRINT initiative of MoHRD for Hierarchical Nanostructure Carbon Materials Derived from Candle Soot and Graphine for High Rate & High Performance Electrodes for Automotive Batteries and Supercapacitors [**Development of Rechargeable Lithium Ion Battery**]	Indian Institute of Technology, Kanpur
15	Financial Support for UAY Project concerning Automobile Sector-Development of Light Weight REEV with Renewable Energy Based Fuel Cell Range Extender ***[Development of Light Weight Aluminium intensive electric vehicle***]	Indian Institute of Technology, Madras
16	Proposal of Setting-up 200 Charging Stations by REIL, Jaipur	Rajasthan Electronics & Instrumentation Limited (REIL), Jaipur
17	Design & Development of AC-DC Combined Public Charging Stations by ARAI	Automotive Research association of India (ARAI), Pune

18	Technology Pilot for DC Charging for EV Bus [***To design High Power DC Chargers for Electric Vehicles***]	Principal Investigator K.K.Wagh Institute of Engineering Education and Research, Nasik, Maharashtra Co- Principal Investigator Panva Engineering Pvt. Ltd., Nasik, Maharashtra
19	Development and Prototyping of ICT enabled Smart Charging Network Components [***To design a bidirectional Electric Vehicle Supply Equipment for charging station***]	Principal Investigator IIT Delhi Co- Principal Investigator Thapar University, Amrita Vishwa Vidyapeetham, Lithium Urban Technologies Industry Partners Elecsys Technologies Pvt. Ltd., Engie (GDF Suez Energy) , Linkwell Telesystems , Yexcube Technologies
20	Development of Indian Urban Driving Cycle for xEV [***To ascertain/develop Driving Cycle for electric/hybrid vehicles in Indian conditions***]	Principal Investigator IIT Madras [Department of Electrical Engineering / Computer Science & Engineering / Civil Engineering], IISc Bangalore (Department of Civil Engineering) Industry Partners Mahindra Electric; Bosch Limited, Bangalore; Robert Bosch Engineering & Business Solutions Pvt. Ltd., Coimbatore
21	HUB and SPOKE consortium for e-2W and e-3W Electric Drives [***To design & develop Non-Permanent Magnet Motor Drives for e2W and e-3W based on actual Drive Cycles in Indian conditions***]	Principal Investigator NFTDC, Hyderabad; TVS-Lucas Limited Institutions IIT Guwahati; IIT Jodhpur; IIT BBSR; VIT Chennai; NITTEE, Surathkal Industry Partners Lucas TVS,Chennai; Ampere Vehicles, Coimbatore; Electrotherm; Lohia Auto Industries
22	Switched Reluctance Traction motor and controller for 2W & 3W [***Due to advances in power Electronics, researches are being done in the field of motor development for EVs. This project is for the development of Switched Reluctance Motor for EVs, which allow for sophisticated control & monitoring of the characteristic of the motors***]	Principal Investigator Aditya Auto Products & Engg. (I) Pvt. Ltd.; NITK Surathkal Industry Partners Hero Eco; Ampere Vehicles Pvt. Ltd.
23	Synchronous Reluctance Motor Drive for Indian Electric Vehicle applications [***Due to advances in power Electronics, researches are being done in the field of motor development for EVs. This project is for the Development of Synchronous Motor for EVs, , which allow for sophisticated control & monitoring of the characteristic of the motors***]	Principal Investigator IIT Madras Industry Partners Mahindra Reva Electric Vehicles Ltd., Bengaluru.

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