ARAI-Catalyzing E-Mobility In India

Worldwide, there is an uproar about the climate change and reducing carbon footprints. The Paris Agreement brings all nations together towards the common goal of limiting global temperature increase to well below 2 degrees Celsius, while pursuing efforts to limit the increase to 1.5 degrees. In India, apart from the Paris agreement, increasing Air Pollution, National energy security by reducing import of oil and gas, and government's thrust on Solar Power generation are the major driving forces for E-mobility. In the era of rapid urbanization, where there will be an adverse environmental impact due to increased transport demand, electric mobility is seen to help reduce air pollution by moving towards

Considering all these aspects, Government of India started National Mission on Electric Mobility (NMEM) in 2011. In the year 2013, National Electric Mobility Mission Plan (NEMMP) 2020 was launched with a view to enhance national energy security, mitigate adverse environmental impacts from road transport vehicle and boost domestic manufacturing capabilities for electric vehicles. NEMMP 2020 envisions target of deploying 6 to 7 million electric vehicles in the country by 2020.

As a part of the NEMMP 2020, the Department of Heavy Industries, Government of India formulated a scheme namely Faster Adoption and Manufacturing of Hybrid & Electric vehicles in India [FAME-India], wherein it is intended to support the hybrid /electric vehicle market development and its manufacturing ecosystem to achieve self-sustenance at the end of the stipulated period. The scheme is one of the green initiatives of the Government of India, which will be one of the biggest contributors in reducing pollution from road transport

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Concept Design, Component Sizing & Specifications ▶ Domain Expertise MBD Toolchain ▶ Simulation & Modeling Tool Chain V-Model Process **System Calibration** ▶ Packaging ► Test System in Loop Component Layout Vehicle Parameterization Harness Design ▶ Validation for Performance, Safety, Durability and Certification

sector in near future. The scheme has 4 focus areas i.e. Technology Development, Demand Creation, Pilot Projects and Charging Infrastructure.

In order to support hybrid or electric vehicles market development and its manufacturing ecosystem in country to achieve self-sustenance in stipulated period, the second phase of Faster Adoption and Manufacturing of Electric Vehicles (FAME) India scheme is launched from 1st April 2019 by Government of India. The scheme has total outlay of Rs. 10000 Crores over the period of three years. This scheme is the expanded version of the FAME India Scheme Phase 1 which was launched on 1st April 2015, with total outlay of Rs. 895 crores. The aim is to incentivise production of electric vehicles for promotion of Electric Mobility in the country. ARAI, a premier research and certification institute in the country, has geared itself to support automotive industry for EV development, evaluation, and certification. Under the FAME project, ARAI has set up the comprehensive state of the art Centre of Excellence (CoE) for Electric Vehicles (2W, 3W, passenger cars, buses and commercial vehicles) and their components such as traction batteries, motors, controllers, chargers etc. The centre also has capabilities in the area of light weighting, structural integrity, materials, simulation, etc. which are important for electric vehicle development.

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Credits: ARAI