3rd Annual Conference on

E-MOBILITY AND CHARGING INFRASTRUCTURE

Policy Direction, Market Prospects and Potential Challenges

December 9-10, 2019, Le Meridien, New Delhi
There is heightened interest in electric vehicles (EVs) globally. This is understandable given that the auto industry, largely powered by fossil fuels, is facing all-round disruption. At a macro level, countries are working towards mitigating climate change, addressing the issue of surging pollution, lowering the crude import bill and ensuring energy security. In this scenario, battery-run EVs with zero tail pipe emissions are emerging as a good alternative.

Governments across the world, including India, are using a carrot-and-stick strategy to push auto sales towards EVs. With a target to ensure that 30 per cent of new sales of cars and two-wheelers are electric by 2030, the government is taking active steps to create an ecosystem for e-mobility. These include fiscal and non-fiscal measures to create demand for such vehicles as well as adequate supplies to ensure the development of charging infrastructure.

In the latest development, the Goods and Services Tax (GST) Council has lowered the tax on EVs from 12 per cent to 5 per cent and on battery chargers from 18 per cent to 5 per cent. Earlier this year, the government announced an outlay of Rs 100 billion for three years for the FAME II (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) scheme to expand the commercial EV fleet. The power ministry is also working on a draft tariff policy that will ensure that discoms charge reasonable electricity rates. Besides, the roads ministry has proposed an exemption from registration fees for battery-operated vehicles.

In March 2019, the cabinet also approved the setting up of a National Mission on Transformative Mobility and Battery Storage, to drive clean, connected, shared, sustainable and holistic mobility initiatives that included a Phased Manufacturing Programme (PMP) up to 2024.

States are also gearing up for the uptake of EVs as a means of mainstream mobility and development of charging infrastructure. Karnataka was the first to launch a comprehensive EV policy, followed by Maharashtra, Andhra Pradesh, Delhi, Kerala, Telangana, Uttar Pradesh and Uttarakhand.

India’s drive towards EV-led mobility has accelerated in recent years. The EV industry witnessed a growth of 124 per cent, selling 56,000 units in financial year 2018 as against 25,000 units in financial year 2017.

Despite the euphoria surrounding EVs, several speed bumps remain in the policy and industry landscape. The biggest hurdle in India’s EV ramp-up is likely to come from its near non-existent EV ecosystem, from charging infrastructure to the manufacture of critical components such as battery cells, motors and controllers, which are mostly being imported from China. A specific concern is that of the electricity grid. What changes need to be made in the grid for it to be able to handle this type of demand?

Directionally, India’s EV policy is on the right track; what the country, however, needs is a comprehensive national implementation plan with clear targets. Any e-vehicle mandate adopted in India will need to have sound legal backing, a well-defined timetable for intermediate goal posts and adequate lead time for manufacturers and fleet managers of all sizes to plan a smooth transition.

Besides resolving the aforementioned issues, going forward, the development of publicly available fast-charging stations will be crucial for supporting the planned EV growth. Further, utilities and power companies need to factor in renewable energy for meeting the power demand from EVs since a key goal for using these vehicles is to reduce pollution.

The mission of this conference is to examine the opportunities, issues and challenges in the Indian e-mobility space; assess the electricity needs and requirements of EVs in the context of the projected segment growth; discuss the plans and requirements of the key stakeholders; examine the charging and other infrastructure requirements; and showcase global case studies as well as noteworthy solutions and technologies. It will also provide a platform for the industry to share experiences and exchange views and opinions.

The conference is targeted at top and middle-level managers from:

- Power producers
- Transmission and distribution companies
- Government and regulatory agencies
- Renewable energy developers
- EV manufacturers
- Automobile manufacturers
- Oil and gas companies
- Automotive component manufacturers
- Battery manufacturers
- Contractors
- Engineering consultants
- Transport planning consultants
- R&D and educational institutions
- Equipment manufacturers
- Technology providers
- Fleet managers
- Financial institutions
- Investment firms, etc.

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Key Trends and Outlook
- What are the key trends and policy initiatives and what is the emerging e-mobility landscape in India?
- What are the potential opportunities for stakeholders and the associated challenges?
- What are the demand and supply projections for EVs and charging infrastructure?

Policy Direction and Vision
- What have been the key initiatives to drive the adoption of EVs and the deployment of charging infrastructure?
- What are the various grants offered or planned for active and upcoming projects?
- What are the expectations from the private sector and the next steps for the segment?

FAME II and Beyond
- What are the key features of FAME II and what has been the industry response?
- What are its likely implications for various stakeholders?
- What are the next steps under the programme?

Regulatory Requirements and Standards
- What have been the key regulatory steps for facilitating the deployment of EVs and charging stations?
- What is the progress in designing the tariff framework for EVs/charging stations?
- What are the current and planned regulatory standards and protocol requirements for charging infrastructure?

Industry Perspective: Transition from Pilot Charging Infra Projects to Mass Roll-out
- What has been the experience of the pilot projects?
- What are the key challenges in the integration of e-mobility needs with the power grid?
- What should be the key considerations while planning a route map for public charging infrastructure?

EV Manufacturers’ Perspective
- What is the manufacturers’ perspective on the emerging EV landscape in India?
- What are the current demand trends? What are their key offerings and future plans?
- What are the technical and non-technical barriers? What is the manufacturers’ outlook?

Impact on Energy Demand: Re-Shaping the Electricity Load Curve
- What is the likely impact of the growth in EVs on electricity demand? What are the potential transmission requirements?
- What solutions can be adopted by grid operators to manage the changing load curve?
- What are the opportunities and challenges for grid operators?

Experience of Bus Transport Operators
- What are the ongoing city-level initiatives for promoting electric buses?
- What is the level of preparedness for both public use of charging networks and vehicle fleets?
- What are the key issues faced by bus operators in dealing with EV infrastructure?

Battery Technology Trends and Cost Outlook
- What are the battery technology options for EVs? Which of these suits Indian conditions the most?
- What are the key technology trends globally? What is the pace of technology advancements?
- How are the costs evolving? What is the future cost outlook?

Battery Recycling and Disposal
- What are the current practices for battery disposal and recycling?
- What are the costs associated with it?
- What is the future outlook? What are the emerging technologies in this regard?

Captive Charging Infrastructure
- What is the potential for captive charging infrastructure in India?
- What could be the possible issues in setting up and operating captive charging infrastructure?
- What are the cost trends? What is the demand outlook?

Technology and Innovation
- What have been the recent technology advancements in the battery and charging infrastructure equipment space?
- What is their likely impact on cost and efficiency?
- What are the ongoing global R&D initiatives? What are the key focus areas?

IoT and Blockchain Solutions for EV Charging Infrastructure
- How can IoT solutions be used for charging station management?
- What can be the potential role of blockchain technology?
- What are the potential cost implications? What has been the global experience?

Opportunities for the PV Segment
- What are the likely benefits of using renewables for charging EVs? What are the challenges?
- What is the cost comparison of using solar energy vis-a-vis conventional fuels for powering EVs?
- What have been the technology advancements in this space?
There is a special low fee of Rs 5,000 per participant for the state power and transport utilities.

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