

## **Electric Mobility Initiative (EMI) Workshop 12-13 April 2022**

The Electric Mobility Initiative (EMI) workshop saw participation from several government stakeholders as well as partners from the CSO network. The inaugural session on 12<sup>th</sup> April included dignitaries from the Government, with a distinguished panel consisting of:

- Shri Sudhendu Sinha, Adviser for Infrastructure Connectivity – Transport and Electric Mobility, NITI Aayog
- Shri Sajid Mubashir, Scientist at the Department of Science and Technology, Government of India
- Ms. Mahua Acharya, Managing Director and CEO of Convergence Energy Services Limited (CESL)
- Dr. OP Aggarwal, CEO, WRI India
- Mr. Mahesh Babu, CEO, Switch Mobility

### **Key Takeaways**

- 1) NITI Aayog spoke about the importance of battery swapping, FAME schemes and PLI scheme for battery manufacturing in India's electric mobility ecosystem. He also stressed on need for financial models to ensure that the EV transition is profitable for stakeholders in manufacturing, purchasing and demand generation. The need for a year-long campaign on awareness was also stressed on.
- 2) DST spoke about how personal charging for 2 and 3 wheelers could be popularised. It was also suggested to consider on-road charging for electrification of buses. DST also spoke at length about the charging infrastructure guidelines released by the Government.
- 3) The need to come up with a solution for financing of EVs was extensively discussed. Transport agencies are increasingly interested to move away from diesel to electric mobility. There needs to be a conversation around carbon credits from electric buses, and use of second life of EV batteries in the short term power markets.
- 4) Electric mobility can help towards solving three problems of oil imports, reducing congestion in the city and making lives of people economically better.
- 5) A panellist quoted that 12bn USD spent on air pollution and health care needs, but even diverting 10% of this towards electric mobility, the same problem could be indirectly solved, with reduced pollution due to this form of mobility.
- 6) Panellists also mentioned studies that show an economic benefit of EVs, if used for more than 100 km.
- 7) Huge opportunity to become a software giant for electric mobility for the next ten years
- 8) Reluctance in funding from banks towards supporting EVs was also mentioned as a challenge.

Post the inaugural session, participants across CSO networks joined 4 parallel breakout sessions that included Manufacturing, Adoption, Charging Infrastructure and Awareness. About 40 participants from the CSO network attended these sessions, with attendees from AEEE, ASCI, CEEW, CSE, CSTEP, CUTS, ERF, GSCC, ICCT, ICLEI, ICRIER, IIEC, IRADe, ITDP, NRDC, Purpose, RMI, The Climate Group, UITP, World Economic Forum, and WRI. Collaboration between partners was one of the highlights of the EMI workshop.

### **Collaboration, Presence and Competence of Partners:**

The sessions on presence, competence and collaboration led to a rich interaction between CSO partners across different areas of electric mobility, spread across the four strategic pillars, vehicle segments and geographies. Few key takeaways included:

- The need for the existing CSO network to collaborate with regional partners, and expanding collaboration between Indian and international partners to apply international learnings and experiences on EVs to the Indian ecosystem.
- Building of consortiums and knowledge sharing networks for different thematic areas

### **Other ideas, gaps and insights from the sessions are listed below:**

#### **1) Strategic Pillars**

##### **a) Manufacturing**

- Periodic review of standards for imported components and their safety norms
- Deep dive into the R&D innovation costs to be met by the govt
- Roadmap for fuel efficiency and emission standards
- Exploring the feasibility of mandates for ZEVs(% of EVs for every ICE)
- Conducting taxation of motor vehicle on emissions
- Identify critical parts of supply chain and design suitable incentives (spare parts/ batteries/other parts of supply chain)

##### **b) Charging Infrastructure**

- Enabling smart charging by facilitating pilots for different use cases and designing a framework for scaling up
- Compendium of Guidelines, Best practices and Business models for role of electricity utilities in EV ecosystem development with a pilot
- Financial modelling for Charging Infrastructure business models for different use cases
- Development of a low-cost universal charging infrastructure architecture for widespread deployment and adoption
- Innovative business models involving operators/unions in E-Freight Charging

### c) Adoption

- State of practice on incentives, charging, financing
- Awareness program for personal vehicle users addressing range anxiety, charging availability etc
- Technical support to Govt agencies (Municipal agencies, STUs, Transport sept) on achieving EV targets
- Engaging with Financing institutions, insurance companies, discoms etc.
- Financing and charging infra support for buses: Focus on STU and intercity buses

### d) Awareness

- Aspirational & FOMO narrative about being the first movers in the EV space - building a trend like fashion : to engage consumers
- Awareness campaign to make business consumers the first movers & build their sustainability brand based on this
- Consumers' awareness of purchase subsidies & incentives that the government is offering
- Ecosystem enablement of info and what all the different stakeholders are doing & how they could support each other. Create alignment.
- OEMs to help dispel myths. Media sensitization & education. Create creative "masala" events & moments for the media to catch on.

## 2) Conversations Specific to e-HDVs

### a) Mandates for e-HDVs around manufacturing, charging infrastructure and financing

- Feasibility / viability of HDV electrification to achieve Zero emission trucking
- Forum for e-HDV with OEMs, Public Agencies, Civil Society etc
- Explore the possibility of mandates on e-HDV / ZET in Indian context
- Regional charging infrastructure plan - Identify hubs for charging buses , trucks and IPTs, Focus on Tier-2 cities, towns and smaller urban centres
- Developing pilots based on use cases- Tractor- trailers for containers, Government fleets (garbage dump trucks, water tankers), MDVs and LDVs
- Convergence of Highway Charging infrastructure with Agri- based use cases with RE options
- Business model for urban and regional E-bus operations.
- Setting up policy framework with clear goals for electrification HDV,MDV,LDV

- Capacity building ( Financial literacy, Product and technology literacy) of Central regulator, Financing institutions

**b) Communication and engagement with stakeholders on HDVs**

- Pan India awareness campaigns on new technology led by CSOs and OEMs with a clear mission and vision
- Awareness campaigns around schools, corporates, SIDCOs, academic institutions
- CSO action for inclusion of trucks in the policy, and proof pointing viable use cases for EV truck transition

**3) National and Sub-National Policies :**

**a) Components of an ideal EV policy (national or sub-national)**

- Exploring the need of it (or not) and its alternative approach (Decarb Transportation Umbrella, EV + Fuel only, fuel agnostic – ZEV, CAFÉ, etc), its drivers, GST and other financial incentives, Scrappage and other integration
- Defining the ideal process for state EV policy (Lead agency, stakeholder partners, Participatory approach, impact oriented, KPI to monitor, Tracking dashboards, annual plans)
- Robust framework and approach for integrating freight vehicles, manufacturing, operations and maintenance in the State EV policies
- Robust ample evidence, and framework for decision makers to incorporate newer aspects of EV ecosystems in policy (such as Scrappage, Retro-fitment, Battery Swapping, etc)
- Consortium to lead and document the success cases for operationalizing the EV policy and its components
- Alignment of State Policies with PLI Schemes

**b) Zero Emission Zones**

- National framework for ZEZ – Commitments, Financing, Monitoring progress
- Policy and Regulation framework for mandating ZEZs
- Identifying geographies and implementing (4) ZEZ pilots

**c) Key Supply Chain Elements**

- Mapping of critical elements of the supply chain to avoid inverted duty structures
- Incubator program for R & D innovation and indigenization of technologies for the ecosystem

- Review of existing policies, identifying gaps and relaxation of land and urban planning norms to encourage generation of renewable energy, (including 2nd use application of batteries) and service and maintenance industry for EVs
- Reimagining CSR to include skilling/re-skilling/up-skilling programs of workers (including partnerships with ASDC and skill council for green jobs)
- Battery passport (labelling) for tracking second use and end of life batteries for improving recycling recoveries and repurposing

#### 4) Session on capacity building of grantee partners :

- Communicating the work of different CSOs through easier to read reports, or podcasts and stories
- The need to create communication pieces in the form of op-eds and podcasts in vernacular medium of communication
- A skill mapping of different CSOs to understand competence as there are different stages and skill sets of different CSOs in the network.
- Developing an understanding of owned and hired technical skills, and how to leverage and share these.
- Building competence in terms of knowledge of regulations that exist, and support practitioners and how to amplify responses to events and policy change