

**Report**  
**One Day Seminar**  
***Theme: Electric Mobility in India – Issues & Options***

**November 30, 2018**  
Hote Le-Meridien, New Delhi

Safety & Quality Forum of The Institution of Engineers (India) jointly with The Institution of Engineering and Technology (UK) Delhi Network organized the one Seminar on E-Mobility – Issues and Options on 30/11/2018 at Hotel Le Meridien New Delhi. The Seminar was supported by The Institution Of Engineers (I) Delhi State Centre, Bureau of Energy Efficiency (BEE) Min Of Power and IEEE.

During the seminar presentations were done by selected Eminent Engineers and personalities with a motive to help in sharing the new concepts and upcoming technologies amongst different stakeholders, especially with people directly concerned with Electric Mobility Mission projects.

Seminar was began with Inaugural Session and Lighting of Lamp. Sh S S Khurana Ex CRB/Railway Board and Principal Secy to Govt. of India was the Chief Guest and Sh Abhay Bakre DG/BEE was the Guest of Honour among the other dignitaries which includes – Shri R N Rajpoot, Chairman, Safety & Quality Forum – IEI, Shri Dinesh Kumar, Chairman, The Institution of Engineers (India), Delhi State Centre, Shri Pradeep Chaturvedi, Council Member, The Institution of Engineers (India), Shri Ashish Srivastav, Secretary, IET Delhi Local Network, Members of IET & IEI, IEEE, Officers from Railways, BEE ,DMRC and other organisations and all above galaxies of Rtd Senior Railway Officers etc

Welcoming the Guests and delegates Sh R N Rajpoot Chairman, Safety & Quality Forum-IEI & Chairman of IET/DLN and Vice Chairman Committee of Communities of South Asia (CCSA) of IET, and Past Chairman of The Institution of Engineers (India), Delhi State Centre, informed about The National Electric Mobility Mission Plan 2030 launched by then Prime Minister in 2013, which is the one of the most important and ambitious initiatives undertaken by the Government of India that has the potential to bring about a transformational paradigm shift in the automotive and transportation industry in the country. This is a culmination of a comprehensive collaborative planning for promotion of hybrid and electric mobility in India through a combination of policies aimed at gradually ensuring a vehicle population of about 6-7 million electric/hybrid vehicles in India by the year 2030 along with a certain level of indigenous technology ensuring India's global leadership in some vehicle segments.

He also highlighted the Draft Policy on E vehicle, issued by Govt. NCT Delhi on 27<sup>th</sup> November 2018 which is one of the 26 commitments made by the Delhi government under the 2018-19 'green budget' in order to combat the rising air pollution in the city  
Shri Dinesh Kumar, Chairman, The Institution of Engineers (India), Delhi State Centre in his address highlighted the necessity and importance of Electrical vehicles in India and Delhi in particular

Shri Pradeep Chaturvedi, Council Member, The Institution of Engineers (India), presented the theme of the seminar and its structure including program of the whole day

Sh Abhay Bakre DG/BEE, the Guest of Honour highlighted the Role of BEE in E Mobility. He shared the policy of Ministry of Power in this regard and over all scenario of Energy in India and necessary steps are being taken by Ministry

Addressing the gathering the Chief Guest Sh SS Khurana Ex CRB/Railway Board shared his views on E Vehicles in India Technological developments problem in implementation and Global scenario and various committees which have been formed time to time to address this issue including Mobility Mission and recently announced Draft Policy of Delhi Govt Shri Ashish Srivastav, Hony Secretary, IET Delhi Local Network proposed the votes of thanks .Sh Aman Rajput Chair /Young Professionals IET/DLN coordinated the entire program

### **Technical Session –I**

Technical session –I on Theme-E-Mobility –Recent Technologies and Development was chaired by Sh Abhay Bakare DG/BEE, Following eminent personalities gave the presentation:-

**Sh H K Agrawal**-gave PPT Highlighting the advantages/importance of E vehicle particularly - High Capacity Pollution Free Electric Trolley Bus. Battery-Electric Bus- Cost Effective, short gestation High Frequency Operation Comfortable Ride and Low Fuel Consumption etc

**Shri Sameer Pandita**, Director /Bureau of Energy Efficiency in his presentation highlighted the role of BEE in E Vehicles Availability of Charging points Policy of Ministry of Power in the regard Problems are expected to be faced in future in implementation of various policies and their remedial actions need to be taken

**Muktiar Singh** Prof Delhi Technological University, Delhi informed the work being carried by DTU in the field of E Mobility In his presentation he highlighted about over all efficiency of E vehicle to be calculated via-via conventional vehicles He also informed about the E vehicles available global market their technological types and relevant advantages  
The session was coordinated by Sh V K Gupta past Chairman IET/DLN

### **Panel Discussion**

#### **Theme-E-Mobility –Present and Future**

The panel discussion was moderated by **Shri Vijay Raina**, Editor, Rail Business, **Shri Pradeep Chaturvedi**, Council Member The Institution of Engineers (India), **Shri V K Dutt**, Former Addl. Member (Electrical) Railway Board **Prof Subrata Mukhopadhyay**, Life Sr Member, IEEErd, Vice Chancellor, Lingayas University, Faridabad and **Sh Satish kumar** Former Director Electrical DMRC were the eminent panellists The Session was coordinated by Sh R N Rajpoot. The panellists expressed their individual pros and cons on E-vehicles shared their experience Sh Raina beautifully moderated the session by involving audience in the discussion It was a interactive session and various inquiries were answered

### **Technical Session –II**

#### **Theme- Electric Mobility – Urban & Rural – Metro/ Road/ Rail**

The session was chaired by Sh V K Dutt former Add.Member/Electrical Following officers and speakers present their presentations:-

**Sh D K Bansal** CEE(Rtd) Indian Railways highlighted the importance of Railway Electrification and its Power supply He informed the disadvantages of NS and method to eliminate the same to avoid DJ On/Off and making Regenerative braking really useful

**Sh Rajnish Rana** of DMRC gave overall operation of Metro system Future planning and use of E-Buses to connect the users with Metro Stations

**Sh Danish Singh** Student of DTU shared the research work is being carried by him under the guidance of Prof Mr Kataria He gave presentation of role of IOT in E-Vehicles

**Sh V K Dutt** Ex AML in his presentation and concluding remarks stated that-**in Indian Context E Mobility on Road require Rail Coefficient be shifted back to Railways.** Energy consumed on moving on Railways is one sixth of the Energy consumed for similar transport on Road. Going for Electric Mobility on Road will lighten our burden of Petroleum products but **Energy consumption can only be reduced when we use Electric Mobility on road as last mile connectivity and transfer the movement to Rail.** For this expansion of Electrified Rail network to say 3 Lakh KM by 2050 may be inescapable. This is in line with suggestions of Niti Ayog and decision of Chinese Railways to build 274000 KM of new Railway by 2050.

Railway Sector is one of the most efficient sectors in Transportation. The Energy Consumed is about one sixth – one tenth of corresponding Energy in Road sector. The consumption in Railways is about 2% of National Electric Energy consumption. With decision of 100 % Electrification on Railways which will get sourced mostly from Renewal Energy as share of Renewal energy like Solar and Wind in National Energy Consumption is set to grow to almost 33% and more.

Session was coordinated by Ms Tarin Baswal CEE/COFMOW

### **Technical Session –III and Valedictory Session Theme- Electric Mobility – Issues and Options**

The session was chaired by **Sh K V Singh Add** DG/Trg CPWD and co Chaired by **Sh A K Ahuja** CEE/PWD Delhi The following eminent speakers gave presentations :-

**Sh Aman Hans** Consultant **NITI AYO**G informed the policy issued by Niti Ayog regarding the procurement of E-buses, their specifications and tendering system not only for Delhi but Pan India bases along with future policies and incentives

**Sh Alekhya Datta** Fellow of The Energy & Resources Institute (TERI) presented on- Electric Vehicles Charging Infrastructure – Policy & Regulatory Aspects & Standards for India he updated the audience with available tariff for charging points and various available incentives in this field

**Ms Tarini Baswal** CEE/COFMOW/Indian Railways in her presentation highlighted the environment issues particularly air pollution and the important role going to be played by E-Vehicles in this field

**Sh A K Ahuja** CEE/PWD Delhi also discussed the important of E vehicles in Delhi to curb the rising pollution He expressed his concerns on implementation issues

**Sh K V Singh** Add DG/Trg CPWD chairman of the session summarised the outcomes of session He emphasised the need of E vehicles in India he urged that Govt should solved the issue of the charging points their availability and power supply arrangement and tariff their off He showed satisfaction that E-mobility mission accompany with policy of Govt .of NCT Delhi by 2023 Delhi will be able to achieve the target of 25% vehicle will be E-Vehicle  
Session was coordinated by Sh Ashish Shrivatava Hony Secy IET/DLN