Online Training Program

ELECTRIC MOBILITY & CHARGING INFRASTRUCTURE

02 July – 05 August 2020
INTRODUCTION

Globally electric vehicles (EV) have emerged as the preferred route to decarbonise the transport sector. With constantly declining cost of batteries combined with impressive increase in the mileage per full charge (up to 400 to 600 km/charge) EV adoption is accelerating in many countries. EV stock touched 1 million mark in December 2015 and it doubled in next one year and the third million was added in next 10 months. The global EV stock at the end of 2019 stood above 7.5 million (excluding 2-Wheelers and 3- Wheelers). In the post Covid-19 world, most countries are contemplating green recovery plan in which electric mobility is likely to play a pivotal role.

In the recent past India has taken various initiatives to stimulate and expedite the adoption of Electric Vehicles (EVs) in the country. In 2013, Government of India (GoI) launched the 'National Electric Mobility Mission Plan (NEMMP) 2020', a pioneering effort to strive towards electrify road transportation. As part of this mission a scheme called Faster Adoption and Manufacturing of Electric Vehicles (FAME) was announced which gave subsidy for 395 electric buses in 11 cities besides several other incentives for EV manufacturers and buyers in 2017. The FAME-II announced in 2019 offered subsidy for 5595 electric buses in 64 cities and 2665 public charging stations. These are scheduled to be deployed in next 2-3 years. The present EV stock in India is primarily dominated by electric 3 Wheelers (E-Ricks) with lead-acid batteries while about 12,000 electric cars are sold so far in the country. In the last 2 years, several new models of EVs have been introduced in India. Ten Indian states have issued state specific EV Policies and 14 States have introduced separate electricity tariff for charging of EVs.

Government of India has set an ambitious plan to electrify the transport sector through aggressive policy interventions that would mandate phasing out manufacturing and sales of ICE based vehicles in a phased manner in the country by 2030. In order to support large scale rollout of EVs, it is necessary to build charging infrastructure and strengthen the electricity distribution infrastructure to support the EV charging load. Bureau of Indian Standards (BIS) has already published the first set of standards for EV charging infrastructure (IS:17017 series). Sustainable business models for running charging stations need to be evolved. Above all, it is important to create talent pool of professionals to build a conducive ecosystem around the entire gamut of EV business. With this background, ISGF is organising this Online Training Program on Electric Mobility and Charging Infrastructure from 02 July to 05 August 2020.
A. REGISTRATION AND PAYMENT

1) TRAINING OPTIONS AND FEE DETAILS:

<table>
<thead>
<tr>
<th>ONLINE TRAINING</th>
<th>OFFLINE TRAINING</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIVE SESSIONS</td>
<td>RECORDED VIDEOS</td>
</tr>
<tr>
<td>INR 7000+GST</td>
<td>INR 4000+GST</td>
</tr>
</tbody>
</table>

2) REGISTRATION AND ONLINE PAYMENT DETAILS:

a. Use the link provided below to Register and make payment for the Online or Offline Training: [https://indiasmartgrid.org/onlinetrainingprogram/](https://indiasmartgrid.org/onlinetrainingprogram/)

b. All Types of Debit Card / Credit Card and Net Banking will be accepted for registration at ISGF Training Portal

3) ALTERNATE PAYMENT OPTIONS:

Trainees can also pay the Training Fee to ISGF through NEFT / Fund Transfer. ISGF Bank details are as follow:
Account Name: India Smart Grid Forum
Address: CBIP Building Malcha Marg New Delhi – 110021
Account Number: 00031110005017
Bank Name: HDFC Bank Ltd
RTGS/NEFT/IFSC Code: HDFC0000003
Bank Address: 209-214 Kailash Building, 26 K G Marg, New Delhi – 110001
### B. TRAINING DELIVERY MODELS

<table>
<thead>
<tr>
<th>ONLINE LIVE TRAINING</th>
<th>OFFLINE -RECORDED TRAINING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainees registered and paid on ISGF website will attend the live training program through WebEx</td>
<td>Trainees registered and paid on ISGF website, will be given the PPTs and other relevant reading materials and the access to the recorded training program videos</td>
</tr>
</tbody>
</table>

### C. COURSE MODULES

- **EV Deployment - Global and Indian Scenarios**
- **Technology Development in EV Domain**
- **EV Charging Infrastructure: Part 1 and 2**
- **Case Studies: Part 1 and 2**
- **Policies and Regulations for EV & EVSE and EV Deployment; Experiences in**
- **Grid Enhancement for EV Charging &VGI**
- **Evolving Technologies**
- **Experience, Challenges & Perspectives of**
  1. EV Manufactures
  2. EV Charging Station Operators
  3. EV Fleet Operators
- **Examination and Valedictory Session**

### D. TRAINING PROGRAM AND COURSE MATERIAL

<table>
<thead>
<tr>
<th>ONLINE LIVE TRAINING</th>
<th>OFFLINE -RECORDED VIDEO TRAINING</th>
</tr>
</thead>
<tbody>
<tr>
<td>A day before each module PPTs and other relevant reading materials will be emailed to all registered participants</td>
<td>PPTs of each module and other relevant materials will be emailed to all registered participants</td>
</tr>
<tr>
<td>Recording of each module will be available online till one month after the training program is completed</td>
<td>Recording of each module will be available online till mentioned last date of material availability of the training program</td>
</tr>
<tr>
<td>If a trainee misses any live sessions owing to other commitments, he/she can watch the recording online and send the queries to the trainer using Google Form given by ISGF and schedule an interactive Audio/Video session with the trainer per mutual convenience</td>
<td></td>
</tr>
</tbody>
</table>
E. QUERY SOLVING

<table>
<thead>
<tr>
<th>ONLINE LIVE TRAINING</th>
<th>OFFLINE RECORDED VIDEO TRAINING</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Q&amp;A for 30 minutes scheduled in each 2 hours sessions</td>
<td>• Queries can be posted in a Google Form so that it is easy for tutor to answer all queries in one sheet and same can be emailed to all attendees</td>
</tr>
<tr>
<td></td>
<td>• Post session, queries can be posted in a Google Form so that it is easy for tutor to answer all queries in one sheet and same can be emailed to all trainees</td>
</tr>
<tr>
<td></td>
<td>• Recorded sessions including all Q&amp;A will be available online on ISGF website under Q&amp;A Section of training for trainees to view</td>
</tr>
<tr>
<td></td>
<td>• There will be a LinkedIn/WhatsApp Group where Q&amp;A will be posted by ISGF</td>
</tr>
<tr>
<td></td>
<td>• There will be a LinkedIn/WhatsApp Group of each batch of the trainees where Q&amp;A will be posted by ISGF</td>
</tr>
<tr>
<td></td>
<td>• Group of trainees can schedule interactive (audio/video) session with tutors as per mutual convenience to clear their doubts</td>
</tr>
</tbody>
</table>

F. EXAMINATION AND CERTIFICATION

**Online Examination** will be conducted at the end of the Program for both Online and Offline Participants

Successful trainees undergoing Online Mode will be issued **Certificate of Merit** and Offline trainees will be issued **Certificate of Participation** in Offline Mode
## G. DETAILED SYLLABUS (DAYWISE)

### DAY 1: 02 July 2020

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details and Tutors</th>
</tr>
</thead>
<tbody>
<tr>
<td>17:00 – 19:45</td>
<td>Welcome and Introduction – Reji Kumar Pillai, ISGF (15 min)</td>
</tr>
</tbody>
</table>

**Module 1: EV Deployment - Global and Indian Scenarios**

**Topics & Tutors:**
- EV Deployment Scenario in India - Akshima Ghate, Rocky Mountain Institute India (30 min)
- ISGF initiative in E-Mobility – Reji Kumar Pillai, ISGF (30 min)
- Key Challenges/Impediments in EV Rollouts - Ravi Seethapathy, ISGF (30 min)
- Global EV Deployment – Experiences, Trends and Future Outlook – Girish Ghatikar (30 min)

**Q & A (30 mins)**

### DAY 2: 04 July 2020

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details and Tutors</th>
</tr>
</thead>
<tbody>
<tr>
<td>17:00 – 20:00</td>
<td>Module 2: Technology Development in EV Domain</td>
</tr>
</tbody>
</table>

**Topics & Tutors:**
- Motor Technologies for EVs – Ramesh Lakra, Quanteon Powertrain (30 min)
- Battery Management System (BMS): Shankar Akella, Ashok Leyland (30 min)
- Key Components of an EV – Motors, Batteries, BMS and other Components: Saad Alam, Illinois Institute of Technology (30 min)
- Battery Technologies and Charging Characteristics: Arumugam Manthiram, UT Austin (30 min)
- Future Trends in BMS – Kartik Shanbhag, ION Energy (30 min)

**Q & A (30 min)**

### DAY 3: 07 July 2020

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details and Tutors</th>
</tr>
</thead>
<tbody>
<tr>
<td>17:00 – 20:00</td>
<td>Module 3: EV Charging Infrastructure: PART-1</td>
</tr>
</tbody>
</table>

**Topics & Tutors:**
- EV Charging Fundamentals, Electric Vehicle Supply Equipment (EVSE), Types of EVSEs and Characteristics — Reji Kumar Pillai, ISGF (60 min)
- EVSE Standards and Communication Protocols PART A – Lonneke Driessen-Mutters, Open Charge Alliance (60 min)
- Connectors, Controllers and Communication Systems – Florian Niere and Amit Tyagi, Phoenix Contact (30 min)

**Q&A (30 min)**
### DAY 4: 09 July 2020

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details and Tutors</th>
</tr>
</thead>
<tbody>
<tr>
<td>17:00 – 20:00</td>
<td>Module 3: EV Charging Infrastructure: PART-2</td>
</tr>
<tr>
<td></td>
<td><strong>Topics &amp; Tutors:</strong></td>
</tr>
<tr>
<td></td>
<td>• EVSE Standards and Communication Protocols PART B – Yoshida, Makoto, Nissan Motors/CHAdeMO Association (45 min)</td>
</tr>
<tr>
<td></td>
<td>• EVSE Standards in China and EVSE Deployment by State Grid Corporation of China (SGCC) - Xiaofei Wang, SGCC/GEIDCO (45 min)</td>
</tr>
<tr>
<td></td>
<td>• Bharat Charger Specifications – PM Singh, Exicom (30 min)</td>
</tr>
<tr>
<td></td>
<td>• EVSE Standards Development in India – Sajid Mubashir (30 min)</td>
</tr>
</tbody>
</table>

### Q &A (30 min)

### DAY 5: 11 July 2020

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details and Tutors</th>
</tr>
</thead>
<tbody>
<tr>
<td>17:00 – 20:00</td>
<td>Module 4: Grid Enhancement for EV Charging and Vehicle - Grid Integration (VGI)</td>
</tr>
<tr>
<td></td>
<td><strong>Topics &amp; Tutors:</strong></td>
</tr>
<tr>
<td></td>
<td>• Current Status of e-Mobility and V2H/V2G Demonstration Projects in Japan: Yuichiro Shimura, MRI (30 min)</td>
</tr>
<tr>
<td></td>
<td>• Vehicle-Grid Integration (VGI) – Matti Aro, VTT, Finland (45 min)</td>
</tr>
<tr>
<td></td>
<td>• EVSE Deployment Plan and Load Assessment on the Grid – Ravi Seethapathy, ISGF (45 min)</td>
</tr>
<tr>
<td></td>
<td>• Grid Capacity Enhancement: Planning and Estimation – Reji Kumar Pillai, ISGF (30 Min)</td>
</tr>
</tbody>
</table>

### Q &A (30 min)

### DAY 6: 14 July 2020

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details and Tutors</th>
</tr>
</thead>
<tbody>
<tr>
<td>17:00 – 19:30</td>
<td>Module 5: CASE STUDIES – PART 1</td>
</tr>
<tr>
<td></td>
<td><strong>Topics:</strong></td>
</tr>
<tr>
<td></td>
<td>• Energy Management Systems (EMS) in a smart energy society – Rahul Choudhary (30 min)</td>
</tr>
<tr>
<td></td>
<td>• Electric Bus Revolution in Shenzhen – Reji Kumar Pillai, ISGF (45 min)</td>
</tr>
<tr>
<td></td>
<td>• ISGF Study on Implementation Plan for Electrification of Public Transportation in Kolkata – Ravi Seethapathy, ISGF (45 min)</td>
</tr>
</tbody>
</table>

### Q &A (30 min)

### DAY 7: 18 July 2020

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details and Tutors</th>
</tr>
</thead>
<tbody>
<tr>
<td>17:00 – 19:30</td>
<td>Module 5: CASE STUDIES – PART 2</td>
</tr>
<tr>
<td></td>
<td><strong>Topics:</strong></td>
</tr>
<tr>
<td></td>
<td>• EVSE PLANNING STUDIES IN BANGALORE – N Murugesan and Anand Singh, ISGF (60 min)</td>
</tr>
<tr>
<td></td>
<td>• Other Indian Case Studies – Reji Kumar Pillai, ISGF (30 min)</td>
</tr>
<tr>
<td></td>
<td>• DISCOM Perspectives for EV Charging and Case Studies – Devanshu Sharma, BYPL</td>
</tr>
</tbody>
</table>

### Q &A (30 min)
| DAY 8: 21 July 2020 |  |
|---------------------|-----------------
| **Time** | **Session Details and Tutors** |
| 17:00 – 19:30 | **Module 6: Policies and Regulations for EV & EVSE**  
**Topics & Tutors:**  
- Government Schemes and Progress: FAME-1, FAME-2; Transformative Mobility and Energy Storage Mission - Reena Suri, ISGF (45 min)  
- State Policies, Subsidies and Incentives – S Kundu, ISGF (30 min)  
- International Experiences – Girish Ghatikar, EPRI (45 min)  
 Q & A (30 min) |

| DAY 9: 23 July 2020 |  |
|---------------------|-----------------
| **Time** | **Session Details and Tutors** |
| 17:00 – 19:30 | **Module 7: Business Models for EV & EVSE and EV Deployment Experiences in India**  
**Topics & Tutors:**  
- Business Models for different EV Segments: Aditya Ramji, Mahindra Electric (60 min)  
- Business Models for EVSE - Reji Kumar Pillai, ISGF (30 min)  
- Electricity Tariff Design for EV Charging - S Kundu, ISGF (30 min)  
 Q & A (30 min) |

| DAY 10: 25 July 2020 |  |
|---------------------|-----------------
| **Time** | **Session Details and Tutors** |
| 17:00 – 19:00 | **Module 8: EV Manufacturer’s Experiences, Challenges and Perspectives**  
- Electric Buses – N. Nagasatyam, Olectra (30 min)  
- Electric Buses – AC Huzefa, Ashok Leyland (30 min)  
- Electric 3 Wheelers – Zafar Eqbal, Goenka Motors (30 min)  
 Q & A (30 min) |

| DAY 11: 28 July 2020 |  |
|---------------------|-----------------
| **Time** | **Session Details and Tutors** |
| 17:00 – 19:30 | **Module 9: EV Fleet Operators Experience, Challenges and Perspectives**  
- Olectra – Anand Swaroop (30 min)  
- Ola - Aishyarya Raman (30 min)  
- WBTC, Kolkata - D. Guha (30 min)  
- EVSE Management and Settlement Solutions – Eyal Blum, Driivz (30 min)  
 Q & A (30 min) |
### DAY 12: 30 July 2020

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details and Tutors</th>
</tr>
</thead>
<tbody>
<tr>
<td>17:00 – 19:30</td>
<td>Module -10: EV Charging Station Operators Experience, Challenges and Perspectives</td>
</tr>
<tr>
<td></td>
<td>• EESL - N. Mohan (30 min)</td>
</tr>
<tr>
<td></td>
<td>• Fortum – Awadhesh Jha (30 min)</td>
</tr>
<tr>
<td></td>
<td>• BESCOM – CK Sreenath (30 min)</td>
</tr>
<tr>
<td></td>
<td>• Tata Power – Sandeep Bangia (30 min)</td>
</tr>
</tbody>
</table>

Q &A (30 min)

### DAY 13: 01 August 2020

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details and Tutors</th>
</tr>
</thead>
<tbody>
<tr>
<td>17:00 – 19:30</td>
<td>Module -11: Evolving Technologies</td>
</tr>
<tr>
<td></td>
<td>• Blockchain based EV Charging and Settlement Solutions – Reena Suri, ISGF (30 min)</td>
</tr>
<tr>
<td></td>
<td>• Case Study: Blockchain based EV Charging and Settlement Solutions – Vinod Tiwari, Power Ledger (45 min)</td>
</tr>
<tr>
<td></td>
<td>• Next Generation Technologies: Super Chargers, Wireless Chargers – Veda Prakash Galigekere, Oak Ridge National Lab (45 min)</td>
</tr>
</tbody>
</table>

Q &A (30 min)

### DAY 14: 05 August 2020

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details and Tutors</th>
</tr>
</thead>
<tbody>
<tr>
<td>17:00 – 18:00</td>
<td>Module -11: Valedictory Session</td>
</tr>
<tr>
<td></td>
<td>• Valedictory Session (60 min)</td>
</tr>
<tr>
<td></td>
<td>Reji Kumar Pillai</td>
</tr>
<tr>
<td></td>
<td>Reena Suri</td>
</tr>
<tr>
<td></td>
<td>And Other Tutors</td>
</tr>
</tbody>
</table>
ADITYA RAMJI
Economist, Mahindra Group

Aditya Ramji is an Economist with the Mahindra Group, focusing on energy, transportation, and electric mobility. He has a specialization in Energy and Development economics. His key areas of work have been energy policy, energy access and development, transport and renewable energy, and program implementation. Prior to joining Mahindra and Mahindra, he has worked with two leading think tanks in India – the Council on Energy, Environment and Water (CEEW), and The Energy and Resources Institute (TERI).

His work has involved policy analysis with a focus on quantitative modelling of energy-economy-environment linkages. He has extensive field experience across India and has published in leading academic journals. He has served on various government committees across key ministries including Ministry of Environment, Forests and Climate Change, Ministry of New and Renewable Energy, Ministry of Railways, Ministry of Health and Family Welfare. He has also engaged closely with the UNFCCC.

AKSHIMA GHATE
Principal, RMI India

Akshima Ghate is a Delhi-based Principal, where she leads research, analysis, and partner engagement. She provides leadership to RMI India’s on-going initiatives with the government agencies at national and sub-national level, which aim to transform mobility trajectory of Indian cities to a shared, clean and people-centric path.

Prior to joining RMI India, Akshima was working as a Senior Fellow and Associate Director at the Transport and Urban Governance Division of the Energy and Resources Institute (TERI), New Delhi. At TERI, Akshima led policy research studies focusing on promotion of sustainable and low-carbon development of transport systems for the Govt. of India, state governments, multilateral and bilateral financing agencies and corporate organizations. She has contributed to several important reports of the Government of India and UN. She was a contributing author of the ‘India Transport Report: Moving India to 2032’ prepared by the National Transport Development Policy Committee of the Government of India. She has published several policy briefs, articles, research papers and reports on policy issues related to promotion of sustainable transport. She also serves on several committees set up by the Govt. of India and international agencies.
In the past, Akshima has also been associated with the TERI University as an Associate Faculty and has been taking guest lectures at the School of Planning and Architecture, New Delhi, Institute of Urban Transport (India) and International Center for Environment Audit and Sustainable Development (iCED), Jaipur.

AISHWARYA RAMAN
Associate Director, Head of Research, Ola Mobility Institute

Aishwarya Raman is the Associate Director and Head of Research, Ola Mobility Institute (OMI), Ola’s research and social innovation think tank. She has been associated with the mobility industry since 2010 - first, while studying the intermediate public transport space for her thesis, and later, as an entrepreneur who worked closely with auto-rickshaw drivers in Chennai, Hyderabad, Delhi and elsewhere. Having joined Ola in 2015, Aishwarya has handled multiple profiles in the company from leading the category of Ola Auto in Hyderabad, Delhi-NCR, and 15 other cities in the North, to being responsible, today, for leading the development of knowledge frameworks at the intersection of mobility and public welfare. At OMI, Aishwarya manages a team of economists, developmental scientists, and urban planners who study the effects of urban mobility and mobility services, climate change and electric mobility, future of work and the changing urban economies, and the interaction of gender and mobility in cities.

A post-graduate in Sociology from the University of Oxford, Aishwarya close to a decade of professional experience. She is the co-founder of AutoRaja, one of South India’s earliest and largest book auto services and has mentored multiple startups by conducting workshops on entrepreneurship. She has also served as a member of the Board of Studies, Department of Sociology at M.O.P. Vaishnav College for Women, University of Madras. Aishwarya is passionate about studying the interplay of technology and society. At OMI, she continues to author studies on urban mobility, electric mobility, gender and accessibility, and the future of mobility and work, and hopes to contribute her bit in creating a sustainable world.

AMIT TYAGI
Business Head, Phoenix Contact

He heads up the E-Mobility on Business and Market Development activities. He mainly focuses on the introduction of the cutting edge Advanced Products and Solutions to the E-Mobility Industry. He is also an active member of many E-Mobility forums, standardizing bodies, associations and committees.
ANAND SINGH  
Sr. Manager, India Smart Grid Forum

Anand carries over 14 years of experience in technology, business consulting and advisory in Smart Grid and Smart City space he is currently working as Senior Manager at India Smart Grid Forum, Delhi. His responsibilities include Utilities and Urban Development projects including standardization of Electrical Vehicle for India and planning and rollout of Electrical Vehicle Charging Infrastructure for Bangalore Electricity Supply Company Limited. Anand has worked as Director at Utileaider Private Limited, Gandhinagar, India. He was accountable for directing the organization to become one of the most valuable companies in smart city domain. He has played a key role to devise smart city solutions to reduce carbon footprints and bring sustainability through innovation. Anand has completed his PhD studies in Smart City focused on energy, utilities and health. His research brings out a smart city maturity model for India.

ANAND SWAROOP  
Chief Operating Officer, Olectra Greentech Limited

A seasoned business leader with a rich professional experience of over 3 decades, Mr. Anand Swaroop is a professional engineer with post graduate in management and currently is the COO of Olectra Greentech limited – a diversified group into EV transport and Electrical products. Olectra greentech is pioneers in Electric mobility in India and diversified group. His extensive management experience lies in steering business operations across the globe and setting up profit center’s by leading large cross-cultural teams in Retail Infra Services, IT & ITES sector, Distribution and System Integration sectors, both in India and abroad in Public sectors, BFSI, B2B and B2C domains. Mr. Swaroop is a turnaround specialist, worked with renowned organizations in various leadership positions. Prior to Olectra, Mr. Swaroop worked in eminent corporate as Senior Vice President at HCL Infosystems, Director and CEO at Lanco Global Systems, Managing Director & Group CEO at Mara-Ison Technologies and Managing Director at SATE.
ARUMUGAM MANTHIRAM
Director, Texas Materials Institute, Materials Science and Engineering Graduate Program,
The University of Texas, Austin, USA

Arunugam Manthiram is currently the Cockrell Family Regents Chair in Engineering and Director of the Texas Materials Institute and the Materials Science and Engineering Program at the University of Texas at Austin (UT-Austin). He received his Ph.D. degree in chemistry from the Indian Institute of Technology Madras in 1981. After working as a postdoctoral researcher at the University of Oxford and at UT-Austin with Professor John Goodenough, he became a faculty member in the Department of Mechanical Engineering at UT-Austin in 1991. Dr. Manthiram’s research is focused on clean energy technologies: rechargeable batteries, fuel cells, and supercapacitors. He has authored more than 740 journal articles with 51,000 citations and an h-index of 113. He directs a large research group with about 30 graduate students and postdoctoral fellows. He has provided research training to more than 200 students and postdoctoral fellows, including the graduation of 58 Ph.D. students and 25 M.S. students. He is the Regional (USA) Editor of Solid State Ionics, Co-Editor of Ceramics in Modern Technologies, and an Associate Editor of Energy and Environmental Materials. Dr. Manthiram is a Fellow of six professional societies: Materials Research Society, Electrochemical Society, American Ceramic Society, Royal Society of Chemistry, American Association for the Advancement of Science, and World Academy of Materials and Manufacturing Engineering. He received the university-wide (one per year) Outstanding Graduate Teaching Award in 2012, the Battery Division Research Award from the Electrochemical Society in 2014, the Distinguished Alumnus Award of the Indian Institute of Technology Madras in 2015, the Billy and Claude R. Hocott Distinguished Centennial Engineering Research Award in 2016, and the Da Vinci Award in 2017. He is a Web of Science Highly Cited Researcher in 2017 and 2018.

AWADHESH JHA
Vice President, Charge & Drive and Sustainability, Fortum

Awadhesh Jha is the vice-president charge & drive and sustainability, Fortum India. He has previously worked with the Ministry of Water Resources and Hindustan Power Projects. He has over 28 years of experience.
CK SREENATH
DGM, BESCOM

Graduated in Electrical Engineering from Sri Siddhartha Institute of Technology affiliated to Bangalore University during 1993. Holds MBA in Project Management. After graduation Started career in steel industry and worked in automation manufacturing industry for about five years before joining Karnataka Electricity Board in 1998. Worked across Karnataka state in Operation and Maintenance of electrical distribution filed for 15 years. Worked in Bangalore city Distribution Automation System (DAS) project for five years. During the project implementation period, as a part of the project development team worked in Atlanta USA for about one and a half years and visited France and United Kingdom during the project period. Also visited South Korea and United Kingdom during 2019 for participation in e-mobility conference. Presently heading Smart Grid and Electric Vehicle wing in corporate office BESCOM for the last two years.

COMMANDER RAMESH LAKRA (RETD)
Founder, Quanteon Powertrain Pvt Ltd

An alumnus of the Military School, Dholpur, National Defence Academy and Naval College of Engineering, now stepped out of uniform to pursue machine design. A kin sportsman who excelled in virtually every sport he picked up and a keen runner even today. He was the Gold Medalist of his course during his Engineering for Academic excellence. Other interests include grand unified theory and marathon running.

An Electrical Engineer by training, he was responsible for the efficient and safe operations of the ships electrical systems including Power Generation and Distribution, Weapon Systems and Communication Equipment. Optimum availability of equipment including inventory management, repair and maintenance planning were also part of the job responsibilities. He has advised two Chiefs of the Naval Staff in his capacity as their personal staff on IT matters which went on to shape the IT policies in the Navy. As part of the design team for the strategic submarine, he played a key role in designing the electric motors and electrical systems. He was instrumental in setting-up the captive battery commissioning facility for submarine batteries which even today are emulated all around the world.

On hanging up boots, founded Quanteon Powertrain Pvt Ltd to design and manufacture axial flux motors for use in Electric Vehicles.

DEBABRATA GUHA, BE
WBTC, Kolkata

Graduated from NIT, Durgapur Working with State Transport in West Bengal for last 28 years.
Looking after the implementation and operations of Electric Buses in Kolkata.
DEVANSHU SHARMA  
DGM - Sustainability & Clean Technology  
BSES Yamuna Power Ltd.

Devanshu Sharma has diverse experience in power distribution sector spanning over 17 years. He holds bachelor’s degree in Electrical Engineering. Currently he heads DSM activities, Electric Vehicles & new technology initiatives in BYPL. In past, he has held several key roles in BSES Delhi in the field of Operations & Maintenance, Commercial operations, Project Planning, Regulatory Affairs, Loss reduction initiatives, customer services.

EYAL BLUM  
VP Business Development, Driivz

Eyal heads Driivz’s Business Development initiatives, and has been with the company since its establishment in 2013. Mr. Blum is a certified lawyer and has 20 years of corporate, business development and legal experience. Prior to Driivz, Mr. Blum served as VP Corporate Operations & Legal at Trans Innovations Group, a leading provider of innovative solutions and digital systems to industries such as Telecom, Medical, Aerospace, and Energy, among others. Before TIG, Mr. Blum held the position of Chief Litigator handling multi-million-dollar contracts and deals, representing large commercial organizations. Between 2012–2016, Mr. Blum was a member of the board at the Ambassadors’ Club of Israel (ACI), a non-profit organization which connects foreign diplomatic personnel with leaders of Israeli companies. Eyal holds an LLB Law degree and is a member of the Israeli Bar Association. In addition, Eyal earned a BA in Finance and Marketing from IDC Herzliya, and holds a MBA degree.

FLORIAN NIERE  
Product Manager Control at Phoenix Contact, Germany

Florian Niere is the Product Manager for charge controller at PHOENIX CONTACT E-Mobility GmbH. Within the Phoenix Contact group, Phoenix Contact E-Mobility GmbH is the competence centre for charging technology for electromobility – and supplies components and solutions for charging infrastructure and electric vehicles. The product portfolio includes charging cables, charging controllers and vehicle inlets for DC and AC charging.
GIRISH GHATIKAR
Technical Executive, Senior Program Manager, EPRI, California, USA

Girish Ghatikar is a Senior Program Manager and leads the information and communication technologies (ICT) for distributed energy resources (DER) and integration research at Electric Power Research Institute (EPRI) in Palo Alto, California. The research identifies, creates, and transfers ICT-centric solutions for the adoption of DER into the power system. Before joining EPRI, Ghatikar was the Chief Research Officer at Greenlots and led the development of electric vehicle-grid and battery storage-integrated systems. At the U.S. Department of Energy’s Lawrence Berkeley National Laboratory, he was the Deputy Leader for Grid Integration program and the Chief Architect for international standard, OpenADR. Girish Ghatikar’s work has appeared in over 75 publications and he is regularly asked to speak at events and conduct training related to clean transportation and clean energy. Ghatikar holds Masters degrees in Telecommunication Systems, Computer Technologies, and Infrastructure Planning.

HUZEF A C
Deputy General Manager -Electric & Hybrid Vehicle Technology
Ashok Leyland

Huzefa has 17+ years of experience in automotive validation, Electric and Hybrid Vehicle development, Program Management, Value Analysis & Value Engineering (VAVE) and New Product Development (NPD). He has led the development of “HYBUS” – Hybrid bus using ultracapacitors and Ashok Leyland’s “CIRCUIT Platform” that are all-electric 9m and 12m buses from Ashok Leyland’s stable. He also has sound knowledge on Six sigma processes and is a certified Green belt and Black belt by Indian Statistical Institute. He leads the Electric & Hybrid Systems Integration team at Ashok Leyland’s Technical Centre.

KARTIK SHANBHAG
Customer Success Lead, ION Energy

Passionate about Electric Vehicles and Renewable Energy, Kartik has over 3 years of experience in the design and development of Battery Management Systems for low and high voltage battery systems. Graduated in Electrical & Electronics Engineering from PES Institute of Technology, he currently leads technical services & consultancy at ION Energy.
LONNEKE DRIESSEN-MUTTERS
Director Standardization & Test Lab, Open Charge Alliance

Lonneke Driessen-Mutters is Director Standardization and Test Lab at ElaadNL. ElaadNL is the Knowledge and Innovation Centre in the field of (smart) charging infrastructure in the Netherlands and is owned by the Dutch grid operators.

Within ElaadNL she is responsible for the EV Charging testing facilities, open standards development in secure EV charging and is in charge of activities regarding the Open Charge Alliance (OCPP) and EClearing.net (Roaming solutions and Public Key Infrastructure solutions).

Mrs. Driessen has a longstanding career in the Utility Industry and has operated in key strategic developments, such as market liberalization, smart metering and smart grids before entering the EV charging domain three years ago. She has a Master of Science degree in Electrical Engineering from the Delft University of Technology.

MAKOTO DAVE YOSHIDA
Secretary General, CHAdeMO Association General Manager, External and Government Affair Department, Nissan Motor Co., Ltd. Senior Manager, Global Government Affair Department, Nissan Motor Co., Ltd.

A mechanical engineer by training and having been involved in electric vehicles over a decade, Makoto Dave YOSHIDA brings to table his expertise in Zero Emission Vehicle (ZEV) technology and Vehicle Safety including especially dedicated to ZEV safety as well in the technical standardization and legislation fields. Makoto Dave YOSHIDA is a joined Nissan Motor Co., Ltd. as mechanical engineer in 1989. In 2001, he was assigned to the CEO/Alliance Office of Nissan when Mr. Carlos Ghosn took office as CEO. Having spent 4 years in Brussels (Technical Centre Europe) and 4 years in the U.S.A. (Chief of Office, Washington D.C. Office of Nissan North America), Mr. Yoshida is now General Manager of External and Government Affairs Department at Nissan, while taking on a variety of external roles, not only representing his company and its organization such as Secretary General of CHAdeMO Association and Vice Chair of EV International Standardization Subcommittee at JAMA (Japan Automobile Manufacturers Association), he also sometimes representing his country, Japan, including APEC Automotive Dialog, APEC Sub-Committee on Standards and Conformance, AMEICC Auto Industry Committee, Japan-China bi-lateral charging Workshop, Japan-German Future Charging infrastructure Dialog, and Secretary of EV Safety GTR Informal Working Group Committee at United Nations ECE WP29 on behalf of Ministry of Land, Infrastructure, Transport, and Tourism and Ministry of Economy, Trade, and Industry.
N MOHAN
Deputy General Manager
Energy Efficiency Services Limited (EESL)

N Mohan is an experienced professional with over 14 years of experience in the field of policy planning, conceptualization and implementation of energy efficiency programs and conceptualization of co-generation & tri-generation system for industries/commercial buildings. He presently heads, Electric Vehicle Charging Infrastructure (EVCI) Department at EESL, an entity under the Ministry of Power, Government of India. EESL is the world’s largest energy service company and is leading India’s Electric mobility initiatives by creating a flourishing market for EVs and EVCI. N Mohan is leading EESL’s vision for the deployment of reliable Charging Infrastructure as a key to driving EV penetration in the country. Under his administration the team is focusing on a holistic deployment of chargers in India with robust - locations, grid, financial, business and technical assessments. He has played a pivotal role in incorporating and developing a digital ecosystem for operational efficiency and performance improvements in the charging infrastructure. N Mohan is leading technology integration initiatives at EESL EVCI including central monitoring system (CMS) and Survey Applications, which will be end user-oriented platforms to promote mass EVCI adoption. Under his headship, EESL has deployed more than 85 Public Charging Stations (PCS) and has plans to deploy more than 5,000 PCS by the end of 2025. Prior to his assignment with EESL, N Mohan has worked with M/s. Forbes Marshall (P) Ltd and M/s. Triveni Turbines Ltd, Bangalore. He is a Mechanical Engineer with master’s degree in Business Administration in Marketing & International Business. N Mohan is a Certified Energy Auditor as notified by the Bureau of Energy Efficiency, Ministry of Power.

N NAGASATYAM
Executive Director, Olectra Greentech Limited

With rich professional experience of over 23 years in Electrical industry ranging between electric vehicles and electric equipment, Mr. Naga Satyam is currently working as the Executive Director at Olectra Greentech Limited - one of the leading electric mobility players in public transport. In his current role, Mr. Naga Satyam is responsible for policy making, strategic guidance and business development for the organization. He was instrumental in Olectra Greentech’s foray into electric bus vertical and played a vital role in enabling the company to achieve the current position of being the largest electric bus player in the country. Having joined Olectra as a Marketing Executive in 1997, Mr. Naga Satyam has proved his excellence in all the responsibilities entrusted to him. During his long professional journey, he has handled multiple projects of critical nature in telecom & electrical products and effectively dealt with various authorities across the country. Taking over as Executive Director and as a Board Member in 2018, Mr. Naga Satyam’s dedicated involvement has ensured a consistent and continuous growth for the organization. Mr. Naga Satyam’s academic background includes Master of Business Administration (MBA) in Marketing from University of Andhra Pradesh and a graduation in Computer science.
N MURUGESAN
Former Director General, CPRI
38 Years of experience in Power Systems, SCADA, Substation, Distribution Automation and Smart Metering.

N Murugesan holds MSc (Engg) and MBA. He has more than 38 years of experience in the area of Smart Metering, Smart Grid, Advanced Metering Infrastructure (AMI), Power Systems, Transmission & Distribution system, SCADA, Substation & Distribution Automation, Switchgear testing & Certification (Low & High voltage equipment) as per National & International standards. Managed one of the largest Power Engineering Research Institute in the world as Director General. He added many infrastructures to carryout Research and for certification of electrical equipment from Low Voltage to EHV Class equipment to meet International and National standards. Managed various laboratories located 7 cities across India (Bangalore, Hyderabad, Nagpur, Bhopal, Noida, Kolkata, Guwahati). Organized more than 400 workshop/ Training / Conferences in the area of Power Engineering. Supervised varieties of Consulting works covering Generation, Transmission and Distribution and managed various Research & Development projects in the above areas. He established Communication Protocol conformance laboratories for the first time in Asia in 2003 and 2008 for Energy Meter and Substation Automation as per IEC 62056 and 61850 respectively. Established other laboratories as per IEC 60870 series, Modbus etc. Certified largest number of products as per above IEC and helped to produce in India. Played an active role in drafting specification under RAPDRP. He was the Chairman to bring Smart Meter standard -BIS 16444 and CBIP Manual for Energy Meter.

MATTI ARO
Research Scientist & Project Manager, VTT

Matti Aro, M.Sc. (Tech.), Matti.Aro@vtt.fi Research Scientist and project manager in the field of Smart Grids at VTT. He received the master’s degree in electrical engineering from Tampere University of Technology in 2017, Power Systems and Markets as his major. Matti is currently pursuing the Ph.D. degree in Tampere University studying Aggregator models in order to accelerate the adoption of demand response solutions in the energy sector. He has solid background in demand response both in industry and research. His late focus has been on Smart Charging schemes to enable electric vehicles to provide demand response through different methods, including aggregation of the flexible potential by Charging Point Operators. Matti will be responsible for the project management inside VTT in a starting EU project (“SENDER”H2020-LC-SC3-EC-3-2020). In this project VTT will, among other things, consider different methods to engage consumers to participate in Smart Charging with their electric vehicles. Overall, VTT has had many projects concerning electric vehicles and V2G, including a project called “EVALIA” and also another called “Smart Charging” project in collaboration with Smart Otaniemi Innovation Ecosystem. In these projects VTT has worked closely with the industry, for example forecasting the V2G potential at different times in different locations. Also in these projects, VTT has concerned the possibility of electric vehicles to provide frequency regulation services for Finnish TSO Fingrid, this concept will be piloted in the next coming months.
PM SINGH
Vice President
Exicom Tele-Systems Limited

Hands-on experience in the development and setup of Design & Engineering Centres. Adept at directing development system in AC-DC Converters, DC-DC Converters, Telecom rectifiers, Network Communication Software products for Telecom application, UPS and Variable Frequency & DC Converters, Variable Voltage motor drives for Industrial applications through Product Qualification, System Integration and Testing. Specialties: Versatile in leading technically qualified teams through all phases of development from technical requirements elicitation to product rollout, including cost analysis and planning. Conversant with implementing Six Sigma Methodologies/Concepts to bring about significant performance enhancements.

RAVI SEETHAPATHY
Ambassador Americas, Global Smart Grid Federation, Honorary Member and WG Chair, ISGF and Chairman, Biosirus Inc. Canada

After 35+ year career in Electric Utilities/Power Systems, Ravi Seethapathy is now an Advisor to the Utility/Industry, and sits on the Boards of Power Transmission & Distribution (IC) Division of Larsen & Toubro, India; Biosirus Inc., Canada; Smart Grid Canada, and India Smart Grid Forum. His current international activities include (1) “Ambassador for the Americas”, Global Smart Grid Forum; (2) CIGRE Converyer WGC6.28-Remote Grids; (3) IEA PVPS Taskforce 14 – Large Scale Solar Integration; (4) IEC TC 120 – Energy Storage; (5) IEC SEG4-LVDC; and (6) Chair, India Smart Grid Forum WG 5-RE & Micro-grids. He an invited speaker internationally and has co-authored over 50 technical papers in the areas of Smart Grid. He Founder/Executive Chair of Biosirus Inc. in Canada. Retired in 2014 after 31-year career in Hydro One/Ontario Hydro (a leading utility in Canada), where he managed leading portfolios in R&D, Innovation, Smart Grid Projects, Energy Storage, Renewable Energy Integration, Asset Management, Corporate Operations/Technical Audit, M&A (500M$), Field Operations, and Relaying and Control. His past corporate directorships include Toronto Atmospheric Fund, Ryerson University, TV Ontario, Scarborough Hospital, Nevaro Capital Corp, Engineers Without Borders (Chair), Canadian Club of Toronto (President), Indo-Canada Chamber of Commerce (President). Ravi has received numerous honours and citations including Queen Elizabeth Diamond Jubilee Medal (2012), Fellow Canadian Academy of Engineering (2012), Hydro One President’s Award (2008), Honour Roll of the Shastri Institute (2008), Honorary Fellow, Centennial College (2005), and Indo-Canada Chamber of Commerce (1996) to name a few. Ravi’s education includes a B. Tech (Hons) in Electrical Power from IIT, Kharagpur, India; an M. Eng. in Electrical Power from the University of Toronto; and an MBA from the Schulich School of Business, York University. His family/he have endowed an IEEE Award in “Rural Electrification Excellence”.

REENA SURI
Executive Director, ISGF

Reena Suri joined India Smart Grid Forum (ISGF), a PPP initiative of Govt of India, in 2013 and is currently the Executive Director of ISGF. She brings over 20 years of experience in the Energy Sector. She is responsible for the research projects, advisory services, business development, training and capacity building programs, customer outreach activities, members relations and finances of ISGF. Reena has contributed to the various advisory services, whitepapers and research reports of ISGF on key Smart Grid domains such as: Smart Grid Roadmaps for Indian, SAARC and ASEAN Utilities; Electric Vehicles and Charging Infrastructure; Blockchain for Electric Utilities; Energy Storage; Smart Metering Infrastructure; Customer Engagement etc. Reena is the founder-editor of the Smart Grid Bulletin published by ISGF since January 2014 which has online circulation of over 75,000 senior professionals in 120+ countries. As an outreach specialist, she has been involved in development of the Customer Outreach programs for the utilities implementing the Smart Grid projects in India. Reena is also responsible for designing and delivering training and capacity building programs on various domains of Smart Grids for policy makers, regulators and utility officials. She is instrumental in making the India Smart Grid Knowledge Portal (www.indiasmartgrid.org), one of the most popular portals on smart grids globally. Reena has worked with ISGF Board to conceive, design, develop and the successful delivery of ISGF’s Annual Event, India Smart Utility Week (ISUW, www.isuw.in) since 2015. She is the Principal Show Director of ISUW which in a short span has grown to be the signature event on Smart Grids and Smart Cities around the world. Prior to joining ISGF, Reena has worked with various International organisations such as Tetra Tech, Nexant Inc., PA Consulting and Academy for Educational Development (AED). She has worked on energy related projects funded by United States Agency for International Development such as Distribution Reform, Upgrades and Management (DRUM) Project, South Asia Regional Energy Initiative for Energy (SARI/E) and Small Grants Program. Under the DRUM Project, Reena worked with electricity distribution companies in India to help them upgrade their infrastructure to match international benchmarks. Reena has also helped in developing several modules on Smart Grid and been instrumental in conducting Train the Trainer workshops. She was involved in conducting a series of Smart Grid Maturity Model (SGMM) workshops for utilities in India. These workshops enabled her to study the position of Indian utilities on SGMM landscape and their aspirations for future. Reena assisted BESCOM in design of their IT Strategy and Roadmap and Pilot Architecture Design for a Smart Grid Pilot.

REJI KUMAR PILLAI
President, ISGF
Chairman, GSGF

Reji is the President of India Smart Grid Forum (www.indiasmartgrid.org) since its inception in 2011 and is also the Chairman of Global Smart Grid Federation since November 2016. He is an internationally renowned expert with over three decades of experience in the electricity sector in diverse functions covering the entire value chain and across continents. He is spearheading a mission to leverage technology to transform the electric grid in India and light every home at affordable cost through sustainable developmental models. Reji played the pivotal role in
formulation of the Smart Grid Vision and Roadmap for India (August 2013) and the launch of a National Smart Grid Mission (March 2015) by Government of India, issue of Model Smart Grid Regulations (June 2015) by Forum of Regulators; and issue of National Standards for Smart Meters (IS: 16444 -2015 and IS 15959 Part 2) and Electric Vehicle Charging Infrastructure (IS: 17017-2018) by Bureau of Indian Standards. He is presently advocating for a “Right to Electricity Act” that will ensure lifeline supply of electricity to all citizens in the country. His current areas of research include: WiFi as Last Mile Connectivity Solution for Smart Metering, Smart Grids as Anchor Infrastructure for Smart Cities, Development of Smart City Maturity Model and Electric Vehicle Maturity Model, Grid Interactive Buildings and Campuses, Blockchain for Utilities; Future of Transportation; Policies and Business Models for Electric Vehicle Rollouts; and Interconnection of Regional Grids in ASEAN, SAARC and GCC countries. In November 2016 Reji was unanimously elected as Chairman of Global Smart Grid Federation (GSGF), a global umbrella organization of smart grid associations from 16 countries and the European Union. As an entrepreneur, Reji has built successful enterprises in India and overseas and exited them. He has studied Engineering, Finance, Management and Law; worked with NTPC and IBM and has been senior consultant with ADB, World Bank and USAID. A recognized thought leader in smart grid technologies and concepts of smart cities, Reji is a popular key-note speaker at international symposiums and conferences on smart grids, smart cities and e-Mobility. He has also contributed to several articles and books.

**SAAD ALAM**  
*Visiting Research Professor, Illinois Institute of Technology, Chicago*

Dr. M. Saad Alam received the B. Tech. degree in electrical engineering from the Aligarh Muslim University, Aligarh, India, in 2003, and the M.S. in electrical and computer engineering with specialization in energy, environment and economics from the Illinois Institute of Technology, Chicago, IL, USA, in 2005. From 2006, he worked on projects sponsored by the US Office of Naval Research on electrification transportation and at Cummins Inc. till Nov 2008 in Tennessee, USA. From December 2008 he joined the automotive team of GM, Daimler Chrysler, Mercedes Hybrid and BMW in Michigan, working as joint consortium on the development of hybrid and electrified power-train. He has also obtained his PhD in electrical engineering in 2009 from Tennessee Tech University, USA. He continued working on the concept hybrid vehicle projects at Chrysler group LLC and played a key role in Battery Management System and Charging Infrastructure till 2010. At Chrysler, He worked on various projects namely: Fiat 500 Battery Electric Vehicle (BEV), RAM Plug-in Hybrid Electric Vehicle (PHEV), Chrysler Town and Country Plug-in Hybrid Electric Vehicle (PHEV), Dodge Durango Hybrid, Chrysler Aspen Hybrid, and Dodge RAM Hybrid 2 Mode HEMI. Afterwards, Dr. Alam worked on FIAT Projects on hybrid power train till 2013. From 2014 till March 2015 he worked for Ford Motor Company R&D on concept future projects on autonomous PHEVs and EVs. Dr. Alam has authored/ co-authored more than 60 publications and delivered talks in the area of hybrid, plug-in hybrid and electric vehicles and their inter-operability with smart grid, in various countries of North America, Europe and Middle East. He has also filed and has published patents in the area of charging infrastructure of EVs and PHEVS particularly V2X and X2V strategies. Dr. Alam is the recipient of the prestigious 2006 IEEE Industrial
Electronics Society student paper award, on hybrid fuel cell vehicles. He was also listed on Bristol Who’s Who and Madison Who’s Who among Professionals and Executives in 2011 and on Mont Clair Who’s Who among Collegiate Faculty in 2012. Currently, Dr. Alam is an Associate Professor of Electrical Engineering at Aligarh Muslim University (AMU) and he is leading the Industrial Collaborative Interdisciplinary research in electric mobility and is the Coordinator of the Center of Advanced Research in Electrified Transportation (CARET) of AMU. Dr. Alam is also leading the Smart Microgrid project initiative for AMU in collaboration with Ministry of Power and Indian Smart Grid Forum (ISGF). At National level, he is also the Member of the Inter-Ministry Advisory Group of the Department of Heavy Industry, Ministry of Science and Technology, Ministry of Road, Transport and Highways, to support the FAME mission (Faster Adoptability and manufacturing of Hybrid and Plug-in Hybrid Electric vehicles) of the Government of India. At International Level, he is the member of SAE task force which is working on developing the International standards for the interoperability of EVs and PHEVs with the smart grid.

SANDEEP BANGIA
Head EV and Home Automation Division, Tata Power

Sandeep Bangia is currently heading the Electric Vehicle and Home Automation Division at Tata Power. He is an electrical engineer with over 24 years of experience and an MBA from Narsee Monjee. He has worked in consumer durables and telecom for Carrier Aircon, Tata Teleservices, Reliance Communications and Idea Cellular in the past. He combines his understanding of emerging technologies & digital platforms, experience in telecom& mobility space and his passion towards clean mobility to drive innovative solutions in the EV charging Ecosystem.

SAJID MUBASHIR
Scientist G, Department of Science & Technology, GoI

Sajid Mubashir is Scientist G in Department of Science & Technology. He is member-secretary for the (new) DHI-DST Technology Platform for Electric Mobility (TPEM), which will implement demand-driven R&D / Roadmap based program to develop technologies in: Battery & Charging Infrastructure; Vehicle Systems Integration; Electrical Components; Materials & Manufacturing. Most of the R&D Projects will be in Public-Private-Partnership mode, as Consortia Projects. The Mission will also establish half dozen major Centers of Excellence in Electric Mobility research. Earlier assignments were: Member R&D at the National Automotive Board (NAB), Department of Heavy Industry. (Last 2 years) Collaborative Automotive R&D (CAR) Program (2004-2010), and Home-Grown Technology Program (HGT) – 1997-2005.
SHANKAR AKELLA
General Manager, Ashok Leyland

Dr. Shankar Akella received his doctoral degree in engineering with controls specialization from The University of Akron, Akron, Ohio, USA. Shankar has more than 20 years' experience in developing and validating control algorithms for various automotive subsystems such as batteries, fuel cells, EV supervisory control, ADAS and autonomous vehicles. Currently he is heading the electronics, control algorithms and new technologies team in EV and eMobility Solutions at Ashok Leyland.

SUDDHASATTA KUNDU
Senior Manager Technical Advisory, ISGF

Suddhasatta is currently working as Senior Manager – Technical Advisory in India Smart Grid Forum (ISGF) and has an experience of more than 10 years in the energy sector. He is an Electrical engineer and an MBA in Power Management. He has worked with various power and transport utilities, multilateral and bilateral agencies across South and South East like Nepal, Bhutan, Bangladesh, Laos, Indonesia etc. on development of electric vehicle implementation roadmap, EV charging business model, Grid enhancement for EV charging infrastructure, smart grid roadmap, policy and regulatory assessment, energy security, cross border power trading etc. and also co-authored various publications on EV and charging infrastructure, EV policies and tariff, smart metering etc.

VINOD TIWARI
Global Head of Business Development and Sales, Power Ledger

Based in Perth, Western Australia, Vinod leads Power Ledger’s global Business Development and Sales teams. Vinod is leveraging his many years working within the energy sector with Perth Energy, Future Effect and Regen Power to connect with client stakeholders and formulate global partnerships and alliances across power and business domains, as well as across various third party providers in Australia and overseas markets to support the delivery of Power Ledger’s blockchain offerings for energy trading, renewable energy certificates trading and renewable asset financing. Vinod has over 25 years of experience in operations, developing strategic partnerships, new markets and providing leadership in senior sales and business development roles within the renewable energy and other engineering industries. He has a successful track record of building and defending market share, expanding product lines, developing renewable portfolio and developing and executing long term strategies to achieve challenging sales targets and influencing key stakeholders at board and senior management levels. Most recently, Vinod was General Manager Sales at Perth Energy (2007 – 2016) with responsibility for all gas and electricity sales. In this role,
Vinod successfully grew the energy sales portfolio from $20 million annual turnover to more than $300 million. Previous roles include managing engineering, technical sales and business development for General Electric Company’s joint venture with Wipro in India. Vinod holds a Bachelor of Engineering in Electrical and Electronics and a Master of Business Administration from the University of Western Australia. He also participated at the Executive Leadership Program at University of California, Berkley, USA.

VEDA PRAKASH GALIGEKERE
Oak Ridge National Laboratory

Dr. Veda Galigekere is currently a Research and Development Staff Member in the Power Electronics and Electric Machinery group at Oak Ridge National Laboratory, Knoxville, USA. He was a Power Electronics Engineer at Lear Corporation, Southfield, Michigan, from 2012 to 2016. He received his M. S. and Ph. D. from Wright State University in Dayton, Ohio, in 2007 and 2012. He is currently an Associate Editor of IEEE Transactions on Industry Applications and has served as a Guest Associate Editor for IEEE transaction on Power Electronics. His interests include high power wireless power transfer for automotive applications, high frequency resonant converters, impedance source converters and small-signal modeling of PWM converters. Dr. Galigekere is a Senior Member of Institute of Electrical and Electronics Engineers, USA.

WANG XIAOFEI
Chief Representative of GEIDCO, State Grid Corporation of China(SGCC)

Mr. Wang Xiaofei has been Working in State Grid Corporation of China(SGCC) for more than 10 years, He is currently the Chief Representative of GEIDCO in India/Indonesia/Malaysia Office, He was responsible for Designing and Maintenance of SGCC EV Charging Online Service Network system, and integrated it into the SGCC online network system. He was also deeply involved into the optimization research of SGCC EV Charging Network, and He also introduced China EV Charging experience into Indonesia/Malaysia, helping Indonesia to design the blueprint of EV Charging network system. He has double Master Degree on Engineering Management and Software Engineering in Both Tsinghua University and Peking University which are top 2 University in China.
YUICHIRO SHIMURA
Research Director Smart Community Group Environment and Energy Division Mitsubishi Research Institute, Inc.

Yuichiro Shimura is Research Director for Mitsubishi Research Institute, Inc. Yuichiro has 28 years of experience in research and consultation for Electric Vehicle (EV) business. Yuichiro conducted many EV related demonstration projects. In 2010, he involved in the early stage of V2B (Vehicle to Building) project and subsequently involved in V2G (Vehicle to Grid) project. He is supporting standardization activities related to vehicle grid integration, a member of IEC SEG 11 “Future sustainable transportation” and a member of JISC-CENELEC annual meeting for smart grid standardization between Japan and Europe. He supported Global Smart Grid Federation (GSGF) activities and wrote some EV related white papers. Yuichiro has published co-authored several books related to EV in Japan.

ZAFAR EQUBAL
Co-Founder & CEO, Goenka Electric Motor Vehicles Pvt. Ltd.

“Zafar Equbal is the founder of Goenka Electric Motor Vehicles Pvt. Ltd. which was established in late 2013’s with the vision of upliftment in technology in the sector of electric vehicles and a long-term experience in the automobile sector made him able to establish a well rooted company. Zafar Equbal, is an automobile engineer. He has been skilled by Failure Mode and Effects Analysis (FMEA), Automotive Engineering, Quality Management, Six Sigma & Quality Assurance and have a strong business development profession along with an engineering background. Zafar Started his career as an Assistant Engineer (Quality) from Utkal Automobile which is a Jamshedpur based company and with the help of the experience, within a span of 1 year he managed to work for TATA Motor with a profile of Quality Engineer. Vigorous hard work paid off and by 2005 he joined hands with Utra Motors which was a very big giant into the sector of electric vehicles where he was promoted to the managerial level and came under the shelter of various big players in the ev market. This achievement did not take him to a rest and kept on reviving his skills and the moment when this company was winded up due to financial crises, Zafar Managed to establish a new company in to the market of EV by the name Argentum Motors Pvt. Ltd. where he played a vital role by becoming the plant head and took the responsibility of supplying the vehicles to the end customer. From this moment, Zafar claimed a proficiency in the Electric Vehicles and managed to gather all of the information related to the vehicles aesthetics.
RAHUL CHOUDHARY
Application Engineer, MathWorks India Pvt. Ltd.

Rahul is Application Engineer with MathWorks India Private Limited and specializes in the field of System Modeling and Control Design. He has over 7 years of experience in the area of Control System Design, System Modeling, Prognostics and Health Monitoring. Prior to joining MathWorks, Rahul worked with Eaton India Engineering Centre as a Control Engineer where he was involved in developing prognostics and health monitoring algorithms for proof of concept projects for Eaton’s Electrical Business using MATLAB and Simulink. He holds a master’s degree in Systems and Control Engineering from Indian Institute of Technology Bombay, Mumbai and a bachelor’s degree in Electronics and Instrumentation Engineering from Institute of Engineering and Technology, Lucknow, India.