



**India
SMART UTILITY
Week 2020**

03 - 07 March 2020
*The Lalit Hotel, Barakhamba Road,
New Delhi, India*

ISUW 2020
International
Conference and
Exhibition on
Smart Utilities for
Smarter Cities

www.isuw.in

Organiser
ISGF
India Smart Grid Forum

3 rd March 2020 Tuesday	4 th March 2020 Wednesday	5 th March 2020 Thursday	6 th March 2020 Friday	7 th March 2020 Saturday
Master Classes Parallel Events Cultural Tours (Optional)	Conference & Exhibition Welcome Reception	Conference & Exhibition	Conference & Exhibition ISGF Innovation Awards 2020 & Gala Dinner	Technical Tours Cultural Tours (Optional)

ISUW 2020: AGENDA AT A GLANCE CONFERENCE THEMES

S/N	Theme	Date	Time
THEME-A: TOWARDS A NET ZERO ENERGY POWER SECTOR - MAINSTREAMING RENEWABLES			
i.	Roadmap for 450 GW Renewable Energy by 2030	04 March 2020 (Wednesday)	12:00~13:30
ii.	Forecasting, Scheduling and Dispatching of Renewable Energy	04 March 2020 (Wednesday)	14:30~16:30
iii.	Power System Flexibility	05 March 2020 (Thursday)	11:30~13:00
iv.	Unleashing a Rooftop Solar Revolution	06 March 2020 (Friday)	11:30~13:00
THEME-B: TOWARDS A CARBON NEUTRAL TRANSPORT SECTOR			
i.	Electric Mobility – Policies and Programs in India vis-a-vis International Scenarios	04 March 2020 (Wednesday)	12:00~13:30
ii.	Electrification of Public Transportation – Experiences and Challenges	04 March 2020 (Wednesday)	14:30~16:30
iii.	EVs and Charging Stations – Technology Trends and Standards	05 March 2020 (Thursday)	11:30~13:30
iv.	Business Models for EV Fleets and Charging Stations	06 March 2020 (Friday)	14:00~16:00
THEME-C: TECHNOLOGIES ENABLING ENERGY TRANSITION			
i.	Energy Storage Technologies for Grid Support and EVs	04 March 2020 (Wednesday)	12:00~13:30
ii.	Digitalization – 250 Million Smart Meters in India by 2024	05 March 2020 (Thursday)	14:00~16:30
THEME-D: ADVANCED AND DISRUPTIVE TECHNOLOGY TRENDS			
i.	Voice of the Customer in the Digital Era	04 March 2020 (Wednesday)	14:30~16:30
ii.	Blockchain Applications in the Energy Sector	06 March 2020 (Friday)	11:30~13:30
iii.	Artificial Intelligence and Robotics	06 March 2020 (Friday)	14:30~16:30
SPECIAL PLENARIES			
i.	Regulations Enabling Energy Transition	04 March 2020 (Wednesday)	17:00~19:00
ii.	Power Systems Security in the Era of Cyber Wars	05 March 2020 (Thursday)	09:30~11:00
iii.	Women in Energy and Energy Transition	05 March 2020 (Thursday)	17:00~19:00
iv.	Future Skills for the Jobs in 2030s	06 March 2020 (Friday)	09:30~11:00

ISUW 2020: AGENDA AT A GLANCE
MASTER CLASSES, BI-LATERAL WORKSHOPS
AND PARALLEL SESSIONS

S/N	Theme	Date	Time
MASTER CLASSES			
i.	TRACK-1: Technologies Enabling Energy Transition: DIGITALIZATION (i) Smart Metering, (ii) Artificial Intelligence, (ii) Advanced Applications, (iv) Case Studies	03 March 2020 (Tuesday)	09:30~17:30
ii.	TRACK-2: Technologies Enabling Energy Transition: E-MOBILITY (i) EV Policies and Programs, (ii) EV Charging Infrastructure, (iii) Technologies and Communications	03 March 2020 (Tuesday)	14:00~17:30
iii.	TRACK-3: Advanced Cyber Security (i) Attack Patterns, (ii) Defenses and Their Limitations, (iii) Designs for High-Threat Environments	03 March 2020 (Tuesday)	09:30~13:30
iv.	TRACK-4: Technologies Enabling Energy Transition: ENERGY STORAGE SYSTEMS (ESS) (i) Battery Technologies, (ii) ESS Applications for Grid Modernization	03 March 2020 (Tuesday)	09:30~17:30
BI-LATERAL WORKSHOPS			
i.	6th US - INDIA Smart Grid Workshop – In collaboration with US Department of Commerce and USAID	04 March 2020 (Wednesday)	14:00~17:00
ii.	3rd FRANCE - INDIA Smart Grid Workshop - in collaboration with THINK SMARTGRIDS, FRANCE	04 March 2020 (Wednesday)	14:00~17:00
iii.	9th EU - INDIA Smart Grid Workshop – In collaboration with Delegation of the European Union to India and the Directorate General Energy, European Commission	05 March 2020 (Thursday)	11:30~16:30
iv.	INDO - SWISS Smart Grid Roundtable - in collaboration with Swissnex	05 March 2020 (Thursday)	11:30~13:30
v.	4th SWEDEN - INDIA Smart Grid Workshop - in collaboration with Business Sweden and Swedish Energy Agency	05 March 2020 (Thursday)	11:30~13:30
PARALLEL SESSIONS			
i.	IEC – IEEE World Smart Energy Standardization Coordination Workshop	03 March 2020 (Tuesday)	10:00~17:00
ii.	Global Perspectives on Energy Transition and Smart Grids – in collaboration with Global Smart Grid Federation	04 March 2020 (Wednesday)	14:00~17:00
iii.	Smart City Gas Distribution	05 March 2020 (Thursday)	11:30~16:30
iv.	Smart Water Distribution - in collaboration with CBIP	06 March 2020 (Friday)	11:30~16:30
v.	Presentation of Selected Technical Papers	06 March 20 20 (Friday)	11:30~16:30
i.	Roundtable on Interconnection of Regional Grids in Asia: SAARC Grid - GCC Grid - ASEAN Grid -In collaboration with USAID India and SARI/EI	06 March 2020 (Wednesday)	14:00~16:30
ii.	Workshop on Optimizing Electricity Grids by District Energy System Integration – in collaboration with APUEA	06 March 2020 (Friday)	11:30~16:30

ISUW 2020: DETAILED AGENDA

03 MARCH 2020 (TUESDAY): MASTER CLASSES	
Time & Venue	Topics & Speakers
Registration – Pre Function Area of Regency	
09:30 ~ 17:30	TRACK-1: Technologies Enabling Energy Transition: DIGITALIZATION (i) Smart Metering, (ii) Artificial Intelligence, (ii) Advanced Applications (iv) Case Studies Regency 1 & 2
14:00 ~ 17:30	TRACK-2: Technologies Enabling Energy Transition: E-MOBILITY (i) EV Policies and Programs, (ii) EV Charging Infrastructure, (iii) Technologies and Communications Regency 3
09:30 ~ 13:30	TRACK-3: Advanced Cyber Security (i) Attack Patterns, (ii) Defenses and Their Limitations, (iii) Designs for High-Threat Environments Regency 3
09:30 ~ 17:30	TRACK-4: Technologies Enabling Energy Transition: ENERGY STORAGE SYSTEMS (ESS) (i) Battery Technologies, (ii) ESS Applications for Grid Modernization Regency 5
DETAILED AGENDA at APPENDIX - L	
13:00 ~ 14:30	Networking Lunch - Pre-Function Area of Regency

03 MARCH 2020 (TUESDAY): PARALLEL SESSIONS	
10:00 ~ 17:00	IEC – IEEE World Smart Energy Standardization Coordination Workshop DETAILED AGENDA at APPENDIX - M Regency 4

ISUW 2020: DETAILED AGENDA

04 MARCH 2020 (WEDNESDAY): CONFERENCE DAY 1			
Registration: Pre-function Area of Crystal Ball Room			
Time & Venue	Session Details & Speakers		
09:30 ~ 11:00	INAUGURATION OF ISUW 2020 CONFERENCE LAMP LIGHTING CEREMONY <i>Welcome Address: Reji Kumar Pillai, President, ISGF</i> Special Addresses: <ol style="list-style-type: none"> Richard Schomberg, IEC Ambassador & Chairman IEC Smart Energy Systems Committee N Venu, Managing Director, ABB Power Grids in India and Region Head – South Asia, Power Grids, ABB Debasish U Banerjee, MD, CESC Kolkata Praveer Sinha, CEO & Managing Director, Tata Power Company Ltd Dharmendra, Chairman, New Delhi Municipal Council Neil Chatterjee, Chairman, Federal Energy Regulatory Commission, USA Ugo Astuto, EU Ambassador to India Barry Gardiner, Member of Parliament for Brent North, House of Commons, London and Shadow Secretary of State for International Trade and Climate Change <i>Inaugural Address: SN Sahai, Secretary, Ministry of Power, Govt of India</i> <i>Vote of Thanks: Ganesh Srinivasan, CEO, Tata Power - DDL</i> Crystal Ball Room 1 & 2		
11:00 ~ 11:20	ANNOUNCEMENTS AND SIGNING OF MOUS/AGREEMENTS <ol style="list-style-type: none"> Launch of Sweden - India Call on Smart Grids Klas Molin, Ambassador of Sweden Ashutosh Sharma, Secretary, Department of Science & Technology, Govt. of India Launch of European Union and India Joint Call on Integrated Local Energy Systems Ugo Astuto, EU Ambassador to India Ashutosh Sharma, Secretary, Department of Science & Technology, Govt. of India Launch of SEW Innovation Fund Crystal Ball Room 1 & 2		
11:20 ~ 11:30	INAUGURATION OF ISUW 2020 EXHIBITION Exhibition Pavilion		
11:30 ~ 12:00	Tea/Coffee Break – Exhibition Pavilion		
12:00~13:30	THEME-A: Towards A Net Zero Energy Power Sector – MAINSTREAMING RENEWABLES (i) ROADMAP FOR 450 GW RE BY 2030 Crystal Ball Room 1 Chair: RP Gupta , Special Secretary, NITI Aayog Moderator: Ravi Seethapathy , Chair of ISGF Working Group and Chairman, Biosirus Inc., Canada Speakers: <ol style="list-style-type: none"> Jean-Christophe Füeg, Ambassador, Swiss Federal Office of Energy Christine Falken-Grosser, Head of Division - Bilateral Energy Cooperation, Federal Ministry for Economic Affairs and Energy, Germany Gurdeep Singh, CMD, NTPC* Antoine Jourdain, Senior VP, COO and Head of International Affairs, ENEDIS, France 	THEME-B: Towards A Carbon Neutral Transport Sector (i) EV POLICIES AND PROGRAMS IN INDIA VIS-A-VIS INTERNATIONAL SCENARIOS Crystal Ball Room 2 Chair: Anil Srivastava , Special Advisor, NITI Aayog and Mission Director for Transformative Mobility and Energy Storage Moderator: Shantanu Jaiswal , Head India Office, BNEF Speakers: <ol style="list-style-type: none"> Depinder Singh Dhesi, Chairman, HERC Kunal Kumar, Joint Secretary, MoHUA and 	THEME-C: Technologies Enabling Energy Transition (i) ENERGY STORAGE TECHNOLOGIES FOR GRID SUPPORT AND EVs Regency 5 Chair: PC Maithani , MNRE Moderator: Rahul Walawalkar , IESA Speakers: <ol style="list-style-type: none"> Arumugam Manthiram, UT Austin (<i>On Video</i>) RP Singh, Chairman, UPERC Scott Moura, UC Berkeley Rakesh Trakru, Toshiba India Subir Sen, ED, Powergrid Nilesh Kane, Add. GM, Tata Power – DDL Mukesh Dadhich, AVP – Sustainability, BYPL

	<p>5. AK Verma, Former Joint Secretary, MoP</p> <p>6. Amal Sinha, CEO, BRPL</p> <p>7. RK Chauhan, Director-Projects, POWERGRID*</p> <p>8. Shalabh Srivastava, Country Director, RTI India</p>	<p>Smart Cities Mission Director</p> <p>3. Pravin Agrawal, Joint Secretary, DHI</p> <p>4. Vedantha Kumar, Head - Transport and Industry International Climate Strategy, UK Govt.</p> <p>5. Rakhi Basu, Senior Transport Specialist, World Bank</p> <p>6. Daniel Bradley, Team Lead, DFID India</p> <p>7. Bhajan Lal Rolan, Joint Transport Commissioner, Government of Rajasthan</p>	<p>8. Satish Singh, Grid Interconnection Pilot Coordinator, USAID India Greening the Grid Program</p>
13:30 ~ 14:30	Networking Lunch – Regal (1st Floor)		
14:30 ~ 16:30	<p>THEME-A: Towards A Net Zero Energy Power Sector – MAINSTREAMING RENEWABLES</p> <p>(ii) FORECASTING, SCHEDULING AND DISPATCHING OF RE</p> <p>Crystal Ball Room 1</p> <p>Chair: SK Rahate, Additional Secretary, MoP</p> <p>Moderator: Remy Garadue-Verdier, ENEDIS, France</p> <p>Speakers:</p> <ol style="list-style-type: none"> Sutirtha Bhattacharya, Chairman, WBERC KVS Baba, CMD, POSOCO V Kesavadas, Chief Engineer & Head, KSEB BB Mehta, Chief Engineer, Gujarat SLDC Lalit Wasan, HoD- Power System Control, Tata Power – DDL Vijayan SR, Hub Digitalization Lead - Grid Automation, ABB Power Grids in India Anil Thomas, Head of Section, Energy Advisory, DNV GL – Energy Sanand Sule, Co -founder and CTO, Climate Connect Technologies 	<p>THEME-B: Towards A Carbon Neutral Transport Sector</p> <p>(ii) ELECTRIFICATION OF PUBLIC TRANSPORTATION: EXPERIENCES AND CHALLENGES</p> <p>Crystal Ball Room 2</p> <p>Chair: Prasanna Patwardhan, President, BOCI</p> <p>Moderator: Girish Ghatikar, ISGF and EPRI</p> <p>Speakers:</p> <ol style="list-style-type: none"> Rajanvir Singh Kapur, MD, WBTC Rajendra Cholan, MD, North West Karnataka Road Transport Corporation Ltd Lonneke Driessen-Mutters, Executive Director, Open Charge Alliance Bhajan Lal Rolan, Joint Transport Commissioner, Government of Rajasthan Toru Sano, Director, NEDO Somesh Kumar, Partner-Power & Utilities, E&Y Anish Mandal, Pilot Manager, USAID India Greening the Grid Program 	<p>THEME-D: Advanced And Disruptive Technology Trends (i) VOICE OF THE CUSTOMER IN THE DIGITAL ERA</p> <p>Regency 5</p> <p>Chair: PR Kumar, CEO, BYPL</p> <p>Moderator: Anant Venkateswaran, ISGF</p> <p>Speakers:</p> <ol style="list-style-type: none"> KK Mishra, Director, MoP Stefan Engelhardt, Vice President-Utilities, SAP Hasit Kaji, Chief- Digital and Information Officer, Tata Power Company Ltd Nick Birrell, Vice President - Industry Strategy, Oracle Utilities Vish Ganti, VP and MD, Autogrid India RP Singh, VP, Smart Energy Water Shweta Kulkarni, Senior Research Associate, Prayas (Energy Group), Pune

		8. Vinita Singh , Chief Engineer, Smart City Gurugram, DHBVN	
16:30 ~ 17:00	Networking Tea Break – Exhibition Pavilion		
17:00 ~ 19:00	SPECIAL PLENARY 1: Regulations Enabling Energy Transition Crystal Ball Room 1 & 2 Special Address: Raj Kumar Singh , Minister of State (IC), Ministries of Power, New and Renewable Energy; and Minister of State for Skill Development, Government of India Plenary Addresses: <ol style="list-style-type: none"> PK Pujari, Chairman, Central Electricity Regulatory Commission (CERC), India Neil Chatterjee, Chairman, Federal Energy Regulatory Commission (FERC), USA Barry Gardiner, Member of Parliament for Brent North, House of Commons, London and Shadow Secretary of State for International Trade and Climate Change Eija-Riitta Korhola, Former MP, European Parliament 		
19:30 Onwards	Welcome Reception and Dinner with Cultural Program <i>(Open to VIPs, Speakers, Delegates, Exhibitors and ISGF Guests)</i> Crystal Ball Room 1 & 2		

04 MARCH 2020 (WEDNESDAY): PARALLEL SESSIONS		
ISUW 2020 : DAY 1 – PARALLEL SESSIONS	Time & Venue	Event Details
	14:00 ~ 17:00	6th US - INDIA Smart Grid Workshop – In collaboration with US Department of Commerce and USAID DETAILED AGENDA at APPENDIX - A Regency 1&2
	14:00 ~ 17:00	3rd FRANCE - INDIA Smart Grid Workshop - in collaboration with THINK SMARTGRIDS, FRANCE DETAILED AGENDA at APPENDIX - B Regency 4
	14:00 ~ 17:00	Global Perspectives on Energy Transition and Smart Grids – in collaboration with Global Smart Grid Federation DETAILED AGENDA at APPENDIX - C Regency 3

ISUW 2020: DETAILED AGENDA

05 MARCH 2020 (THURSDAY): CONFERENCE DAY 2			
Time & Venue	Session Details & Speakers		
09:30 ~ 11:00	<p>SPECIAL PLENARY 2: Power Systems Security in the Era of Cyber Wars Chair: Ajeet Bajpai, DG, NCIIPC Moderator: Laurent Ferrari, Sr VP - Strategy, EDF International, France Speakers:</p> <ol style="list-style-type: none"> 1. Andrew Ginter, Vice President, Waterfall Security Solutions, Canada 2. Narendra Taneja, Chairman, Independent Energy Policy Institute 3. Muktesh Chander, Special Commissioner, Delhi Police 4. Sandesh Kumar Sharma, Member, CEA* 5. Faruk Kazi, Professor, VJTI, and ISGF Working Group Chair <p style="color: #f4a460;">Crystal Ball Room 1 & 2</p>		
11:00 ~ 11:30	Tea/Coffee Break – Exhibition Pavilion		
11:30 ~ 13:30	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>THEME-A: Towards A Net Zero Energy Power Sector – MAINSTREAMING RENEWABLES (iii) POWER SYSTEM FLEXIBILITY Crystal Ball Room 1 Chair: P Mhaske, Chairman, CEA Moderator: Ravi Seethapathy, Chair of ISGF Working Group and Chairman, Biosirus Inc., Canada Speakers:</p> <ol style="list-style-type: none"> 1. Ghanshyam Prasad, Chief Engineer, Ministry of Power 2. PK Agarwal, Director- POSOCO 3. N Venu, Managing Director, ABB Power Grids in India and Region Head – South Asia, Power Grids, ABB 4. Winfried Damm, Head of Indo-German Energy Programme, India 5. Randi Kristiansen, Economics & Financial Analyst, Gas, Coal and Power Division, IEA 6. Raymond Kaiser, Director of Energy Management Systems, Amzur, USA 7. Shishir Shekhar, Worldwide Industry Manager, Utilities & Energy, MathWorks, USA </td> <td style="width: 50%; vertical-align: top;"> <p>THEME-B: Towards A Carbon Neutral Transport Sector (iii) EVs AND EV CHARGING STATIONS – TECHNOLOGY TRENDS AND STANDARDS Crystal Ball Room 2 Chair: Abhay Bakre, DG, Bureau of Energy Efficiency Moderator: Sajid Mubashir, Scientist-G, Department of Science & Technology, Govt. of India and Chair of BIS ETD-51 Committee Speakers:</p> <ol style="list-style-type: none"> 1. Nishant Arya, ED, JBM 2. Chetan Maini, Founder and Chairman, Sun Mobility 3. Sandeep Bangia, Head - EV and Home Automation, Tata Power Company Ltd 4. Madhan Mohan, R&D Team Manager, Grid & Power Quality Solutions, ABB 5. PM Singh, Exicom 6. Nihar Raj, AVP – ABB Power Grids in India 7. Prabhjot Kaur, Centre for Battery Engineering and Electric Vehicles (C-BEEV), IIT-Madras </td> </tr> </table>	<p>THEME-A: Towards A Net Zero Energy Power Sector – MAINSTREAMING RENEWABLES (iii) POWER SYSTEM FLEXIBILITY Crystal Ball Room 1 Chair: P Mhaske, Chairman, CEA Moderator: Ravi Seethapathy, Chair of ISGF Working Group and Chairman, Biosirus Inc., Canada Speakers:</p> <ol style="list-style-type: none"> 1. Ghanshyam Prasad, Chief Engineer, Ministry of Power 2. PK Agarwal, Director- POSOCO 3. N Venu, Managing Director, ABB Power Grids in India and Region Head – South Asia, Power Grids, ABB 4. Winfried Damm, Head of Indo-German Energy Programme, India 5. Randi Kristiansen, Economics & Financial Analyst, Gas, Coal and Power Division, IEA 6. Raymond Kaiser, Director of Energy Management Systems, Amzur, USA 7. Shishir Shekhar, Worldwide Industry Manager, Utilities & Energy, MathWorks, USA 	<p>THEME-B: Towards A Carbon Neutral Transport Sector (iii) EVs AND EV CHARGING STATIONS – TECHNOLOGY TRENDS AND STANDARDS Crystal Ball Room 2 Chair: Abhay Bakre, DG, Bureau of Energy Efficiency Moderator: Sajid Mubashir, Scientist-G, Department of Science & Technology, Govt. of India and Chair of BIS ETD-51 Committee Speakers:</p> <ol style="list-style-type: none"> 1. Nishant Arya, ED, JBM 2. Chetan Maini, Founder and Chairman, Sun Mobility 3. Sandeep Bangia, Head - EV and Home Automation, Tata Power Company Ltd 4. Madhan Mohan, R&D Team Manager, Grid & Power Quality Solutions, ABB 5. PM Singh, Exicom 6. Nihar Raj, AVP – ABB Power Grids in India 7. Prabhjot Kaur, Centre for Battery Engineering and Electric Vehicles (C-BEEV), IIT-Madras
<p>THEME-A: Towards A Net Zero Energy Power Sector – MAINSTREAMING RENEWABLES (iii) POWER SYSTEM FLEXIBILITY Crystal Ball Room 1 Chair: P Mhaske, Chairman, CEA Moderator: Ravi Seethapathy, Chair of ISGF Working Group and Chairman, Biosirus Inc., Canada Speakers:</p> <ol style="list-style-type: none"> 1. Ghanshyam Prasad, Chief Engineer, Ministry of Power 2. PK Agarwal, Director- POSOCO 3. N Venu, Managing Director, ABB Power Grids in India and Region Head – South Asia, Power Grids, ABB 4. Winfried Damm, Head of Indo-German Energy Programme, India 5. Randi Kristiansen, Economics & Financial Analyst, Gas, Coal and Power Division, IEA 6. Raymond Kaiser, Director of Energy Management Systems, Amzur, USA 7. Shishir Shekhar, Worldwide Industry Manager, Utilities & Energy, MathWorks, USA 	<p>THEME-B: Towards A Carbon Neutral Transport Sector (iii) EVs AND EV CHARGING STATIONS – TECHNOLOGY TRENDS AND STANDARDS Crystal Ball Room 2 Chair: Abhay Bakre, DG, Bureau of Energy Efficiency Moderator: Sajid Mubashir, Scientist-G, Department of Science & Technology, Govt. of India and Chair of BIS ETD-51 Committee Speakers:</p> <ol style="list-style-type: none"> 1. Nishant Arya, ED, JBM 2. Chetan Maini, Founder and Chairman, Sun Mobility 3. Sandeep Bangia, Head - EV and Home Automation, Tata Power Company Ltd 4. Madhan Mohan, R&D Team Manager, Grid & Power Quality Solutions, ABB 5. PM Singh, Exicom 6. Nihar Raj, AVP – ABB Power Grids in India 7. Prabhjot Kaur, Centre for Battery Engineering and Electric Vehicles (C-BEEV), IIT-Madras 		
13:00 ~ 14:00	Networking Lunch – Regal (1st Floor)		
14:00 ~ 16:30	<p>THEME-C: Technologies Enabling Energy Transition – DIGITALIZATION (ii) 250 Million Smart Meters in India by 2024 Crystal Ball Room 1 & 2 Chair: Mrityunjay Kumar Narayan, Joint Secretary, Ministry of Power</p> <p>PART 1: ROLLOUT CHALLENGES Moderator: Ajoy Rajani, ISGF Speakers:</p> <ol style="list-style-type: none"> 1. Shatrujeet Singh Kapoor, CMD, UHBVN & DHBVN 2. Daniel E Nordell, AMI Leader, XCEL Energy 3. Kulman Ghising, MD, Nepal Electricity Authority* 4. Palka Sahni, ED, PFC 5. Phil Beecher, Wi-SUN Alliance 6. MB Rajesh Gowda, MD, BESCOM 		

05 MARCH 2020: CONFERENCE DAY 2 - THEMATIC SESSIONS

	<p>7. Vinit Mishra, Director-Power and Utilities, E&Y 8. Nabil Sahri, VP, Sajemcom Energy and Telecom 9. D Basak, Chief - Commercial, Tata Power - DDL</p> <p>PART 2: ADVANCED APPLICATIONS AND ANALYTICS Chair: Vishal Kapoor, Director, MoP Moderator: Anant Venkateswaran, ISGF Speakers:</p> <ol style="list-style-type: none"> 1. Sylvain Jouhanneau, Project Director – India Smart Metering, EDF 2. Nick Birrell, Vice President - Industry Strategy, Oracle Utilities 3. Rajeev Arun Ekka, MD, Jharkhand BVNL* 4. Ketan N Shah, Utility Head, Accenture India 5. Martin Hauske, Asia Pacific Energy Segment Leader, Nokia 6. Indrajit Das, Assistant Vice President, Fluentgrid 7. Rajesh Srivastava, Head – Procurement, BYPL
16:30 ~ 17:00	Tea/Coffee Break – Exhibition Pavilion
17:00 ~19:00	<p>SPECIAL PLENARY 3: Women in Energy and the Energy Transition Crystal Ball Room 1 & 2</p> <p>PART 1: Role of Women in Transition of Energy Utilities- Experience Sharing Chair: Eija-Riitta Korhola, Former MP, European Parliament Moderator: Palka Sahni, ED, PFC Speakers:</p> <ol style="list-style-type: none"> 1. Reihana Mohideen, Melbourne Energy Institute, University of Melbourne, Australia 2. Anjali Chandra, Member, PERC 3. Antoine Jourdain, CTO and Board Member, ENEDIS, France 4. Randi Kristiansen, Economist and Financial Analyst, IEA 5. Kavita Saraswat, Senior Power Engineer, World Bank-South Asia Energy Unit 6. Sumaya Mohamed, Director, Power for All, Uganda <p>PART 2: Policies and Practices by Energy Utilities in Empowerment of Women Workforce Chair: Marie-Line Bassette, MD, EDF International Networks, France Moderator: Reena Suri, Executive Director, ISGF Speakers:</p> <ol style="list-style-type: none"> 1. Nagalaxmi Selvarajani, CMD, APEPDCL 2. Jean-Christophe Füeg, Ambassador, Swiss Federal Office of Energy 3. Shivani Kumar, GM - Customer Care, BSES Rajdhani Power Limited 4. Kiran Gupta, Head – Customer Services, Tata Power – DDL 5. Ludvig Lindstrom, Country Manager India, Swedish Energy Agency 6. Chandha Neupane, Project Manager, Nepal Electricity Authority

05 MARCH 2020 (THURSDAY): PARALLEL SESSIONS

05 MARCH 2020: DAY 2 - PARALLEL SESSIONS

Time & Venue	Event Details
11:30 ~ 16:30	9th EU - INDIA Smart Grid Workshop – In collaboration with Delegation of the European Union to India and the Directorate General Energy, European Commission DETAILED AGENDA at APPENDIX - D Regency 1 & 2
11:30 ~ 13:30	INDO - SWISS Smart Grid Roundtable - in collaboration with Swissnex DETAILED AGENDA at APPENDIX - E Regency 4
11:30 ~ 13:30	SWEDEN - INDIA Smart Grid Workshop - in collaboration with Business Sweden and Swedish Energy Agency DETAILED AGENDA at APPENDIX - F Regency 5
11:30 ~ 16:30	Smart City Gas Distribution DETAILED AGENDA at APPENDIX - G Regency 3

ISUW 2020: DETAILED AGENDA

06 MARCH 2020 (FRIDAY): CONFERENCE DAY 3

06 MARCH 2020: CONFERENCE DAY 3 - THEMATIC SESSIONS

Time	Session Details & Speakers	
09:30 ~ 11:00	<p>SPECIAL INAUGURAL PLENARY IV: Future Skills for the Jobs in 2030 Crystal Ball Room 1 & 2 Chair: Saurabh Srivastava, Founder and Chairman, Indian Angel Network Moderator: Reihana Mohideen, Melbourne Energy Institute, University of Melbourne, Australia Speakers:</p> <ol style="list-style-type: none"> 1. MM Nayak, Commissioner- Education, Andhra Pradesh 2. Amal Sinha, CEO, BRPL 3. Rakesh Kumar Upadhyay, Former CMD, BSNL 4. Chandan Chowdhury, Dean, ISB 5. Ganesh Srinivasan, CEO, Tata Power - DDL 6. Amit Kumar Pandey, President, Hanson Robotics 7. Christian Schaffner, Executive Director of the Energy Science Centre (ESC), ETH Zurich 	
11:00 ~ 11:30	<p>Tea/Coffee Break – Exhibition Pavilion</p>	
11:30 ~ 13:00	<p>THEME-A: Towards A Net Zero Energy Power Sector – MAINSTREAMING RENEWABLES (iv) UNLEASHING A SOLAR ROOFTOP REVOLUTION Crystal Ball Room 1 Chair: Sanjay Malhotra, Additional Secretary, MoP Moderator: Girish Ghatikar, ISGF and EPRI Speakers:</p> <ol style="list-style-type: none"> 1. TC Gupta, Additional Chief Secretary Transport, Power and New and Renewable Energy, Government of Haryana 2. BP Singh, Former Member, DERC 3. G Raghumareddy, CMD, TSSPDCL 4. Mahesh Singh, MD, UGVCL 5. Chinmaya Acharya, CEO(Acting), Shakti Sustainable Energy Foundation 6. Abhishek Ranjan, Head- Renewables and DSM, BRPL 7. Rakesh Kumar, International Solar Alliance 8. Ravinder Singh, Tata Power Company Ltd 9. Jagdish Acharya, CEO, GridSteer 	<p>THEME-D: Advanced And Disruptive Technology Trends (ii) BLOCKCHAIN APPLICATIONS IN THE ENERGY SECTOR (in Collaboration with Energy Web Foundation and Energy Blockchain Consortium) Crystal Ball Room 2 Chair: KK Mishra, Director, MoP Moderator: Reena Suri, Executive Director, ISGF Speakers:</p> <ol style="list-style-type: none"> 1. Nitin Gavhane, Energy Web Foundation, Germany 2. PK Agarwal, Director, POSOCO 3. Vinod Tiwari, Head of Business Development and Sales, Power Ledger, Australia 4. Rene Schumann, Professor, HES-SO Valais-Wallis, Switzerland 5. Hazril Izan Bahari, Director - Digital Services, SEDA, Malaysia 6. Gianluca Corbellini, CEO and Co-founder, Hive Power, Switzerland 7. Jitendra Nalwaya, Head - System Operation & Sustainability, BYPL 8. Anshumali Bhushan, CEO, Genesis
13:00 ~ 14:00	<p>Networking Lunch – Regal (1st Floor)</p>	
14:30 ~ 16:30	<p>THEME-D: Advanced And Disruptive Technology Trends (iii) ARTIFICIAL INTELLIGENCE AND ROBOTICS Crystal Ball Room 1 Chair: Amit Kumar Pandey, President, Hanson Robotics Moderator: Remy Garadue-Verdier, ENEDIS, France Speakers:</p> <ol style="list-style-type: none"> 1. Sumit Gupta, Founder and CEO, Asset Plus Consulting 2. Amitava Ghosh, VP Engineering, Bidgely 3. Sujit Bhattacharya, Chief Innovation Officer and Founder, CL Educate 	<p>THEME-B: Towards A Carbon Neutral Transport Sector – (iv) BUSINESS MODELS FOR EV FLEETS and CHARGING STATIONS Crystal Ball Room 2 Chair: Ravindra Singh Dhillon, Director (Projects), PFC Moderator: Rahul Tongia, Fellow, Brookings India & Founding Advisor, ISGF Speakers:</p> <ol style="list-style-type: none"> 1. OP Agarwal, CEO, WRI – India 2. N Mohan, DGM-Technical, EESL

	<p>4. Kishore Narang, Narnix Design Studio</p> <p>5. Ashutosh Natraj, Founder and CEO, Vidrona Ltd</p> <p>6. S Samanta, Head-IT, Tata Power – DDL</p> <p>7. Anshuman Sharma, Regional Product Specialist-Transformer Intelligence and Parts, ABB Power Grids in India</p> <p>8. Nikhil Kurele, Co-Founder & CEO, Nocca Robotics</p> <p>9. Sanand Sule, Co -Founder & CTO, Climate Connect Technologies</p>	<p>3. Abhijeet Sinha, National Director, EoDB</p> <p>4. CK Sreenath, DGM-Smart Grid & EV, BESCOM</p> <p>5. Pradeep Agarwal, DGM - Renewable & E-Mobility Initiatives, BRPL</p> <p>6. Kumud Wadhwa, Senior General Manager, NSGM</p> <p>7. Sandeep Bangia, Head - EV and Home Automation, Tata Power Company Ltd</p> <p>8. Indradip Mitra, Senior Energy Advisor, GIZ</p>
16:30 ~ 17.00	Tea/Coffee Break – Exhibition Pavilion	
17:00 ~ 18.00	<p>Valedictory Session</p> <p>Valedictory Address by Chief Guest: PR Kumar, CEO, BYPL</p> <p>A. Distribution of Mementos to Partners and Exhibitors</p> <p>B. Lucky Draw for Visitors to the Exhibition</p> <p>C. Vote of Thanks and Announcement of ISUW 2021</p> <p>Crystal Ball Room 2</p>	
19:30 Onwards	<p>ISGF INNOVATION AWARDS AND GALA DINNER</p> <p>Live Performances</p> <p>Crystal Ball Room 1 & 2</p>	

06 MARCH 2020 (FRIDAY): PARALLEL SESSIONS

06 MARCH 2020: DAY 3 - PARALLEL SESSIONS

Time & Venue	Event Details
11:30 ~ 16:30	Smart Water Distribution DETAILED AGENDA at APPENDIX - H Regency 1 & 2
11:00 ~ 16:30	Presentation of Selected Technical Papers (Top 25 Papers) DETAILED AGENDA at APPENDIX - I Regency 4
11:30 ~ 16:30	Workshop on Optimizing Electricity Grids by District Energy System Integration – in collaboration with APUEA DETAILED AGENDA at APPENDIX - J Regency 5
14:00 ~ 16:30	Roundtable on Interconnection of Regional Grids in Asia: SAARC Grid - GCC Grid - ASEAN Grid DETAILED AGENDA at APPENDIX - K Chair: SK Rahate, Additional Secretary, MoP Regency 3

6th U.S. - INDIA SMART GRID WORKSHOP– IN COLLABORATION WITH US DEPARTMENT OF COMMERCE AND USAID

Jointly Organized By



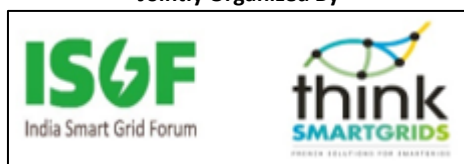
**Regency 1 & 2, The Lalit Hotel, New Delhi
04 MARCH 2020, 14:00 TO 17:00**

DRAFT AGENDA	
Time: 14:00~14:15	INAUGURAL SESSION
Welcome Address: ISGF	
Inaugural Address: Aileen Nandi, Minister Counselor for Commercial Affairs, Embassy of USA in India*	
Time: 14:15~15:30	SESSION 1: ELECTRIC UTILITY OF THE FUTURE: IS THERE AN IDEAL UTILITY BUSINESS MODEL?
Background	
<p>The electric utility industry is in the midst of a global transformation which includes a strong focus on deploying new technologies to increase system digitalization as well as adjust to the decentralization of the electricity assets. Distribution utilities are challenged to embrace new business models to respond to these system changes, while increasing system reliability, resiliency, and sustainability. The panel will discuss lessons learned in the United States and India on deployment and use of smart grid infrastructure, distributed energy resources (DERs) and software systems to respond to a shifting global landscape. Panellists will discuss business models, utility use-cases, and examine value of the new systems to the utility and customer. Panellists will provide their perspective on what is an ideal market structure to best position electric utilities to support the grid of the future.</p>	
Moderator: Rahul Tongia, Fellow - Brookings India & Founding Advisor, ISGF	Contact: tongia.cmu@gmail.com
Speakers:	
<ol style="list-style-type: none"> 1. Neil Chatterjee, Chairman, Federal Energy Regulatory Commission 2. SS Chauhan, Chairperson, Delhi Electricity Regulatory Commission 3. Sutirtha Bhattacharya, Chairperson, WBERC 4. Larisa Dobriansky, Chief Business & Policy Innovation Officer for General Microgrids Inc. and former Deputy Assistant Secretary for National Energy Policy, U.S. Department of Energy 5. IS Jha, Member, CERC 6. Vishal Kapoor, Director, MoP 7. G Raghuma Reddy, Chairman & Managing Director, Telangana State Southern Power Distribution Company Limited (TSSPDCL) 8. Ganesh Srinivasan, CEO, Tata Power Delhi Distribution Limited 9. Gaurav Bhatiani, Director - Energy, RTI International India 10. Vish Ganti, Country Head, Autogrid 	
Time: 15:30~16:45	SESSION 2: TRANSITION TO ELECTRIC MOBILITY
Background	
<p>Government of India has launched an Electric Mobility Mission and a scheme called Faster Adoption and Manufacturing of Electric Vehicles (FAME). Under FAME-I scheme 11 cities were given grants in 2018 for 395 electric buses which are operating currently. Under FAME-II launched in 2019, grants were allotted for 5595 electric buses in 64 cities to be deployed in next 2-3 years. The present EV stock is primarily dominated by electric 3 Wheelers (E-Ricks) with lead-acid batteries while less than 10,000 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. Under FAME-II there is a provision for grant for EV charging stations. Overall fast paced activities are undergoing in the E-Mobility domain in India. This panel will discuss about the policies and programs India is pursuing to leapfrog to E-Mobility and the challenges faced by utilities in creation of adequate EV charging stations to support the E-Mobility plans. In this panel, Indian Utilities and U.S. Companies will share their experiences and views in supporting electric vehicles.</p>	

Moderator: G Ganesh Das , COO – Clean Energy International Incubation Centre and Head - Collaborations and Smart Grid Lab, Tata Power-DDL	Contact: ganesh.das@tatapower-ddl.com
Speakers: <ol style="list-style-type: none"> 1. UN Behera, Chairperson, OERC 2. Mukesh Khuller, Member, MERC 3. Shantanu Basu, MD, WBSEDCL* 4. Saurabh Kumar, Managing Director, EESL* 5. Amal Sinha, CEO, BSES Rajdhani Power Limited 6. Partha Dey, India Operations Leader, EOS Energy Storage* 7. Sabyasachi Pattanaik, Director-Regulatory Affair & Market Development, Oracle Utilities 8. Aravind Bharadwaj, CTO, Mahindra and Mahindra * 	
Time: 16:45~17:00	NETWORKING
Session Coordinator: Balasubramanyam Karnam, ISGF	Contacts: bala.k@indiasmartgrid.org +91 81212 76498

3rd FRANCE – INDIA SMART GRID WORKSHOP

Jointly Organized By



Regency 4, The Lalit Hotel, New Delhi

04 MARCH 2020, 14:00 TO 17:00

AGENDA	
Time: 14:00~14:15	INAUGURATION OF FRENCH – INDIA SMART GRID WORKSHOP
Welcome Address: <ol style="list-style-type: none"> ISGF Valerie-Anne Lencznar, Managing Director of Think Smartgrids, France Special Address: AK Verma , Former Joint Secretary, Ministry of Power Inaugural Address: Daniel Maître , Head of the Regional Economic Department, South Asia, French Embassy, New Delhi	
Time: 14:15~15:30	SESSION 1
Chair: AK Verma , Former Joint Secretary, Ministry of Power Topic: Microgrids and Islanded Networks Presenters: <ol style="list-style-type: none"> Christophe Feuillard, EDF International Networks, Vice President for Asia Stéphane Jamet, Head of Microgrids, ENEDIS, France Sanjay Banga, President, Tata Power Company Ltd Ashok Das, Founder and CEO, Sun Moksha Topic: New Technologies for Distribution Utilities Presenters: <ol style="list-style-type: none"> Manish Kumar, Director Digital Sales, GE Power Deepak Pandey, Operations Leader, GE Software Solutions - South Asia Topic: AFD (The French Development Agency) Perspective and New Trends in India Presenters: <ol style="list-style-type: none"> Philippe Serres, Regional Director South Asia, AFD Kedar Sawant - Project Manager, Energy, Environment and Digital Transition, AFD 	
Time: 15:30~16:15	SESSION 2
Chair: Harinath Rao , CMD, APSPDCL, Andhra Pradesh Topic: Atos practical experience of implementing successful Smart Grid project (in France and/or elsewhere) relevant to the Indian Market Presenters: <ol style="list-style-type: none"> Paul Da Cruz, Global Head of Business Development - Energy and Utilities, ATOS Muralidharan Ramachandran, Director, ATOS India Topic: T&D Asset Performance Management Systems (APM) Presenters: <ol style="list-style-type: none"> Anil Kadam, Solution Architect, Schneider Electric India 	
Time: 16:15~16:45	SESSION 3: Panel on “The Challenges of Data for Tomorrow’s Utilities”
Moderators: <ol style="list-style-type: none"> Anant Venkateswaran, ISGF Aurélien Sostaponti, Head of Industries & Cleantech Department in India, Business France Panellist: <ol style="list-style-type: none"> Anil Kadam, Solution Architect, Schneider Electric India Paul Da Cruz, Atos T Prabhakar Rao, Member, Tamil Nadu Electricity Regulatory Commission Sandeep Kapoor, CTO, UHBVN and DHBVN 	

<p>5. Sudhir Gupta, Chief Engineer, PDD, Jammu</p> <p>6. Rakesh Pandey, AGM, NTPC</p> <p>7. Madan Pal, Advisor (RE), NDMC</p> <p>8. Shashank Andey, GM, Noida Power Company Ltd</p> <p>9. KS Sisodiya, Chief Engineer (IT), Ajmer VVNL</p>	
Time: 16:45~17:00	Closing Remarks and Next Steps
<p>Closing Remarks: Dana Purcarescu, Deputy Chief of Mission, French embassy</p>	
Session Coordinator: Bindeshwary Rai, ISGF	Contact: b.rai@indiasmartgrid.org +91 98683 35485

ROUNDTABLE ON

GLOBAL PERSPECTIVES ON ENERGY TRANSITION AND SMART GRIDS

Jointly Organized By



REGENCY 3, THE LALIT HOTEL, NEW DELHI
04 MARCH 2020, 14:00 TO 17:00

AGENDA	
<p>Background</p> <p>Energy transition is a pathway towards transformation of global societies from fossil fuel-based system to zero-carbon by the middle of this century. Decarbonization of the energy sector requires top priorities as many other verticals such as transportation, water production/treatment and HVAC are increasingly being electrified. This decarbonization of other verticals (electrification), puts a heavy burden on the energy sector to ensure overall success.</p> <p><i>Theoretically, Renewable Energy (RE) and Energy Efficiency (EE) measures can potentially achieve 70-90% of the required carbon reductions, but a practical pathway needs to be developed for mass adoption. The architecture and flexibility of future energy systems (Smart grid) must intelligently integrate the actions of all stakeholders and users - generators, T&D, consumers and prosumers— in all their energy needs (electricity, heat, cool, transport, etc.) in order to efficiently deliver sustainable, economic and secure electricity supply.</i></p>	
<p>Key Topics</p> <ol style="list-style-type: none"> 1. Do you think Renewables (both T&D connected) is difficult to implement in your countries (lack of design, standards, and implementation)? How can it be helped? 2. What is the status of Smart Meter rollout in your countries (Electricity/Water/Gas)? Are you implementing TOU rates for all customers? What are the major impediments? What help is needed? 3. Do you think Energy Efficiency is difficult to implement in your countries (lack of design, standards, and implementation)? How can it be helped? 4. What steps are being taken to increase distributed energy resources and rooftop solar in LV levels, in your communities? What is the target penetration? What Grid Code changes have been made to facilitate this? 5. Is Local Integrated Resource Planning (LIRP) being initiated to address last mile needs (generation, heat, cool, load management)? IF not, what are your efforts in this area? 	
<p>Chair: Eddie Widiono, Chairman, Indonesia Smart Grid Initiative (PJCI) and former President, PT.PLN, Indonesia</p>	<p>Moderator: Ravi Seethapathy, Ambassador Americas Global Smart Grid Federation, Chairman, Biosirus Inc., Canada</p> <p>Email:</p>
Time: 14:00 - 14:15	Opening Remarks Chair and Moderator
Time: 14:15 - 15:15	Panel-1
<p>Panellists:</p> <ol style="list-style-type: none"> 1. Arvind Jadhav, Former Chief Secretary, Karnataka 2. RN Sen, Former Chairman, WBERC 3. Rohan Seneviratne, Deputy General Manager, CEB, Sri Lanka 4. Patrick Clerens, Secretary General, EASE* 5. Gopal Saxena, Former CEO, BRPL and BYPL 6. Raymond Kaiser, Director of Energy Management Systems, Amzur, USA 	
Time: 15:15-15:30	Break
Time: 15:30-16:30	Panel- 2
<p>Panellists:</p>	

1. **Pankaj Batra**, Former Chairman, CEA
2. **BP Singh**, Former Member, DERC
3. **Ujjwal Deep Dahal**, Director, Druk Holdings & Investment
4. **RR Mehta**, Former CEO, Reliance Energy
5. **Martin Hauske**, Asia Pacific Energy Segment Sales Leader, Nokia
6. **Gianluca Corbellini**, CEO and Co-Founder, Hive Power
7. **IA Khan**, Former Chairman, Telangana ERC
8. **Rahul Tongia**, Fellow, Brookings India & Founding Advisor, ISGF
9. **Hitendra Dev Shakya**, Managing Director, NEA Engineering Company
10. **Mohammad Hossain**, Director General, Bangladesh Power Development Board
11. **Michael Williamson**, Section Chief- Energy Division, UN ESCAP **(On Video)**
12. **Mohammad Abdullah Al-Drazi**, Protocol Officer, GCCIA*
13. **RK Chauhan**, Director – Projects, Power Grid Corporation of India*
14. **Rajesh K Mediratta**, Director (Business Development), IEX
15. **Rajiv Mishra**, Director, PTC India
16. **Harry Dhaul**, DG, IPPAI
17. **Sunil Wadhwa**, Advisor, IPPAI
18. **Ghanshyam Prasad**, Chief Engineer, MoP
19. **SR Narasimhan**, Director – System Operation, POSOCO

Time: 16:30-16:55

Open House

Time: 16:55-17:00

**Closing Remarks by
Chair and Moderator**

Session Coordinators:

Aashima Chaney, ISGF

Parul, ISGF

Contact:

aashima@indiasmartgrid.org

parul@indiasmartgrid.org

**9th EU - INDIA SMART GRID WORKSHOP – IN COLLABORATION WITH DELEGATION
OF THE EUROPEAN UNION TO INDIA AND THE DIRECTORATE GENERAL ENERGY,
EUROPEAN COMMISSION**

Jointly Organized By



**Regency 1 & 2, The Lalit Hotel, New Delhi
05 MARCH 2020, 11:30 TO 16:30**

DRAFT AGENDA	
Time: 11:30~11:45	INAUGURAL SESSION
<p>Welcome Address: ISGF Inaugural Address:</p> <ol style="list-style-type: none"> Mrityunjay Kumar Narayan, Joint Secretary, Ministry of Power Matthieu Craye, European Commission, DG ENERGY 	
<p>Background</p> <p>Given the need for India and Europe to integrate more Renewable Energy Sources (RES) and therefore the need to provide more flexibility to the power system, it is important to develop, demonstrate and deploy Energy Storage Systems (ESS) for flexibility at grid scale.</p> <p>ESS at grid level could offer balancing services (FCR, FRR) and contributes to power quality (e.g. voltage control and angular stability).</p> <p>This workshop will start by setting the scene from a TSO perspective and the challenges the TSOs face with increasing share of RES in the energy system, from the European as well as from the Indian perspectives. Then Market Design will be addressed by on the one hand showing the state of thinking of the Indian Regulator to be followed by sharing regulatory experiences from Europe (existing regulatory framework and possibilities to evolve for a better ESS uptake). Finally, project developers as well as equipment suppliers will share examples of successful grid scale energy storage projects.</p>	
<p>Key Topics</p> <ol style="list-style-type: none"> Ongoing EU-INDIA Cooperation in Smart Grid Projects Energy Storage System Technologies and Choices ESS Pilot Projects in Europe and India Innovation and Business Model Trends in Grid-scale energy Storage Regulatory Challenges for Integrating Storage 	
Time: 11:45~13:30	SESSION 1: GRID SCALE ENERGY STORAGE: SYSTEM NEEDS, MARKET DESIGN AND REGULATORY ISSUES
<p>Moderator: Christophe Arnoult, Smart Grid Expert, European Commission</p>	<p>Contact: arnoultc@hotmail.com</p>
<p>Speakers:</p> <ol style="list-style-type: none"> Praveer Sinha, CEO & MD, Tata Power Company Ltd Subir Sen, Executive Director, POWERGRID Patrick Clerens, Secretary General Energy Technologies Europe, European Association for the Storage of Energy (EASE) Pradyumna Bhagwat, Research Fellow, Florence School of Regulations Amit Kumar, Partner (Clean Energy), PwC India Luis Migual Costa, Head of Digital Solutions, L&T BB Mehta, Chief Engineer, Gujarat SLDC 	
<p>Followed by Panel Discussion</p>	
Time: 13:30~14:30	NETWORKING LUNCH
Time: 14:30~16:00	SESSION 2: GRID SCALE ENERGY STORAGE SYSTEM PROJECTS IN EUROPEAN UNION AND INDIA

Moderator: Christophe Arnoult , Smart Grid Expert, European Commission	Contact: arnoultc@hotmail.com
Speakers:	
<ol style="list-style-type: none"> 1. Sumant Sinha, Chairman, ReNew Power* 2. Rémy Garaude-Verdier, Energy Storage in the Interflex Project, ENEDIS, France 3. Jatindra Nath Swain, Chairman & Managing Director, SECI* 4. Álvaro Nofuentes Prieto, Energy Storage in the Crossbow Project, ETRA 5. Jitendra Nalwaya, Head - System Operation & Sustainability, BYPL 6. Sebastian Marx, Director Public Affairs, Texel Energy Storage 7. Rupam Raja, Director, Fluence, India 	
Time: 16:00~16:15	PANEL DISCUSSION
Time: 16:15~16:30	SESSION 3: CLOSING REMARKS
<ol style="list-style-type: none"> 1. ISGF 2. Edwin Koekkoek, Energy and Climate Counsellor, EU Delegation to India 	
Time: 16:30~17:00	TOUR OF EU PAVILION
Session Coordinator: Balasubramanyam Karnam , ISGF	Contacts: bala.k@indiasmartgrid.org +91 81212 76498

INDO - SWISS SMART GRID ROUNDTABLE - IN COLLABORATION WITH SWISSNEX

Jointly Organized By



Regency 4, The Lalit Hotel, New Delhi

05 MARCH 2020, 11:30 TO 13:0

AGENDA	
Time: 11:30~12:00	INAUGURATION OF INDO - SWISS SMART GRID ROUNDTABLE
<p>Welcome Address: Reji Kumar Pillai, President, ISGF</p> <p>Keynote address:</p> <ol style="list-style-type: none"> AK Mishra, Director, NSGM and Co-Chair, ISGAN Palka Sahni, Executive Director, IPDS, PFC Limited <p>Inaugural Address: Christian Schaffner, Executive Director, Energy Science Center (ESC), ETH Zurich</p>	
Time: 12:00~12:45	PANEL 1: DIGITALIZATION OF GRID
<p>Key Topics</p> <ol style="list-style-type: none"> Swiss Technologies Indian Case Studies Research and Innovations in the Domain Partnerships and Technology Transfer 	
<p>Chair: AK Mishra, Director, NSGM and Co-Chair, ISGAN</p>	
<p>Speakers:</p> <p>Swiss side</p> <ol style="list-style-type: none"> Christian Schaffner, Executive Director of the Energy Science Center (ESC), ETH Zurich Patrick Favre-Perrod, Professor, Electrical Power Systems, HES-SO University of Applied Sciences Western Switzerland Philippe Bieri, COO, Gilytics René Schumann, Professor, HES-SO Valais-Wallis <p>Indian Side</p> <ol style="list-style-type: none"> Gaurav A Sharma, AVP, BSES Yamuna Power Limited Nishant Arya, ED, JBM Balu Ramasamy, Director, Oracle Utilities Solutions Vijayan SR, Hub Digitalization Lead - Grid Automation, ABB Power Grids in India Faruk Kazi, Professor, VJTI, Mumbai, and Chair of ISGF Working Group Girish Ghatikar, Sr. Program Manager, Electric Power Research Institute, and Chair of ISGF Working Group Pankaj Batra, Project Director, SARI/EI/IRADe & Ex-Chairperson, Central Electricity Authority Vineeta Aggarwal, Dy GM, POWERGRID Rishi Goyal, GM-Meter Management, BRPL 	
Time: 12:45~13:20	PANEL 2: DISRUPTIVE TECHNOLOGIES – AI, ML, BLOCKCHAIN AND ROBOTICS
<p>Background</p> <ol style="list-style-type: none"> Swiss Technologies Indian Case Studies Research and Innovations in the domain Partnerships and Technology Transfer 	
<p>Chair: G Ganesh Das, COO – Clean Energy International Incubation Centre and Head - Collaborations and Smart Grid Lab, Tata Power-DDL</p>	
<p>Speakers:</p> <p>Swiss Side</p> <ol style="list-style-type: none"> Veronica Garcia, CEO & Founder, Bitlumens Jagdish Acharya, CEO, GridSteer Gianluca Corbellini, CEO and Co-founder, Hive Power Daniel Rüffer, Business Development Manager, Sensirion AG <p>Indian Side</p>	

1. **JBV Reddy**, Scientist - E, Department of Science and Technology
2. **PK Agarwal**, Director, Market Operations and CISO, POSOCO
3. **OD Naidu**, Principal Scientist, Corporate Research Center, ABB
4. **Faruk Kazi**, Professor, VJTI, Mumbai, and Chair of ISGF Working Group
5. **Sumit Gupta**, Founder and CEO, Atpug Plus Consulting
6. **Sujit Bhattacharya**, Chief Innovation Officer and Founder, CL Educate

Time: 13:20~13:30

CLOSING REMARKS AND NEXT STEPS

Sebastien Hug, Consul General and CEO, Swissnex India

Session Coordinator:

Bindeshwary Rai, ISGF

Contacts:

b.rai@indiasmartgrid.org | +91 98683 35485

4th SWEDEN - INDIA SMART GRID WORKSHOP - IN COLLABORATION WITH BUSINESS SWEDEN AND SWEDISH ENERGY AGENCY

Jointly Organized By



**Regency 4, The Lalit Hotel, New Delhi
05 MARCH 2020, 11:30 TO 13:30**

AGENDA	
Time: 11:30 ~ 12:00	INAUGURAL SESSION
<p>Welcome Address: ISGF</p> <p>Opening Remarks:</p> <ol style="list-style-type: none"> Sanjay Bajpai, Head of Technology Missions Division (Energy, Water & all Other), Department of Science & Technology Ludvig Lindstrom, Country Manager India, Swedish Energy Agency <p>Theme Address: Smart Grid and E-mobility – Engagement Observations and Strategy by: Albin Carlén, International Director, Swedish Smart Grid Forum</p> <p>Special Address: Innovation and Collaboration between Sweden and Indian by: Anders Tofte, APAC Business Development Director and Deputy Trade Commissioner, Business Sweden</p>	
Time: 12:00 ~ 12:30	SESSION 1: INTRODUCTION OF PARTICIPANTS – SWEDISH AND INDIAN COMPANIES
Time: 12:30~13:20	SESSION 2: ROUNDTABLE DISCUSSION – MAIN THEMES
<p>Promoting Renewable Energy Integration and Managing Variability through Advanced Smart Grid Technologies</p> <ol style="list-style-type: none"> Sandip Sinha, Vice President Microgrid and Head Renewables, ABB Abhishek Ranjan, AVP – Renewables & DSM, Power Planning & Scheduling, BRPL Atul Bali, Sr Manager, NPMU, NSGM <p>Enhancing Grid Security and Reliability through Effective Monitoring and Power Quality Management</p> <ol style="list-style-type: none"> Prabhjot Kaur, Centre for Battery Engineering and Electric Vehicles (C-BEEV), IIT-Madras* Ashok Das, Founder and CEO, Sun Moksha Andreas Winter, Co-CEO, Swedish Neutral Amrish Kubavat, Business Development Manager, Metrum <p>Developing localized Smart Grid Solutions from End User Perspective through Joint Indo-Swedish Approach</p> <ol style="list-style-type: none"> Awadhesh Jha, Vice President – Charge & Drive and Sustainability, Fortum Charge & Drive India Pvt. Ltd. CK Sreenath, Deputy General Manager – Smart Grid & Electric Vehicle, BESCO Anil Arora, Country Head, Cleanmotion 	
Time: 13:20~13:30	CONCLUSION AND CLOSING REMARKS
<p>Session Coordinator: Shuvam Sarkar Roy, ISGF</p>	<p>Contacts: shuvam@indiasmartgrid.org +91 98749 69066</p>

SMART CITY GAS DISTRIBUTION



Regency 3, The Lalit Hotel, New Delhi
05 MARCH 2020, 12:00 TO 17:30

DRAFT AGENDA	
Time: 12:00~12:30	INAUGURAL SESSION
<p>Welcome Address: ISGF</p> <p>Special Address:</p> <p>Manjeet Singh, Sr VP, IGL</p> <p>Ravi Agarwal, Executive Director, (Marketing-JV), GAIL</p> <p>Inaugural Address: Satpal Garg, Member, PNGRB*</p> <p>Vote of Thanks: ISGF</p>	
Time: 12:30~13:30	SESSION 1: NEW TECHNOLOGIES, INNOVATIONS AND TRENDS IN CITY GAS DISTRIBUTION
<p>Background</p> <p>The 100 smart cities program in India has brought focus on upgrading the water infrastructure and city gas distribution along with efforts for making the grid smarter besides several other infrastructure upgrades to smarter systems and e-governance. However, lack of effective policy and regulations both at the central and state level along with inadequate safety guidelines, standards, business models act as barriers for its growth. The automation and IT systems and the last mile connectivity solutions for building a smart electricity grid can be leveraged for automating the water and gas distribution systems at marginal cost. Similarly, the billing and collection systems of the electric utility can be leveraged to provide a single bill for all 3 services – electricity, water and gas. This will not only enhance convenience of the customer who has to pay only one bill but will also reduce the cost of business operations for the gas and water utilities. From this perspective, ISGF feels there is a compelling business case to bring water and gas utilities to the smart grid forum and explore the collaborative business. There are many common issues that all water gas and electrical utilities are facing with municipal authorities and regulatory bodies which again can be effectively addressed jointly. On the technology and business process side as well, there are many things electricity, gas and water utilities can learn from each other.</p> <p>Key Topics</p> <ol style="list-style-type: none"> 1. SCADA and GIS 2. Digitalization: Smart Metering, Meter Data Management, Analytics and Dash Boards, IT and OT Convergence 3. Cyber Security 4. Fast Filling Dispensers, Modular and Mobile CNG Stations <p>Chair: Raman Srivastava, Chief General Manager, IGL</p> <p>Speakers:</p> <ol style="list-style-type: none"> 1. Sushil Kumar, Deputy General Manager, GAIL 2. Vinay Dixit, National Manager, Itron 3. Dharmendra Tomar, Dy. General Manager, Tata Communications 4. Balu Ramaswamy, Director, Oracle Utilities 5. Nikhil Chaturvedi, Vice-President, Industrial Engineering, SAP, Tokyo 	
Time: 13:30~14:30	NETWORKING LUNCH
Time: 14:30~15:30	SESSION 2: CUSTOMER PERSPECTIVE: CURRENT REQUIREMENTS AND KEY ISSUES
<p>Key Topics</p> <ol style="list-style-type: none"> 1. What are the current requirements of the key consuming segments? 2. How are the requirements being met? What are the gas sourcing strategies? 3. What are the key issues and challenges? 4. New initiatives for customer delight <p>Chair: Rajiv Sikka, CEO, Indian Oil Adani*</p>	

Speakers:	
<ol style="list-style-type: none"> 1. Jiledar, Consultant, PNGRB and former Managing Director, Green Gas Limited 2. PK Pandey, Vice President, IGL 3. Sandep Trehan, Founder and President, Think Gas 4. Anshumali Bhushan, Co-Founder & Director, Genesis 5. Tarun Katiyar, General Manager, TPDDL 	
Time: 15:30~16:00	TEA/COFFEE BREAK
Time: 15:30~17:00	SESSION 3: REGULATORY PERSPECTIVE AND EMERGING TRENDS AND NEW OPPORTUNITIES IN NATURAL GAS VEHICLES
Chair: Vipin Chittoda , Convener, Natural Gas Society	
Part 1: REGULATORY PERSPECTIVE	
Key Topics	
What are the recent regulatory developments?	
What will be the impact of these developments on the gas industry?	
What are the key unaddressed regulatory issues and concerns?	
Speakers:	
<ol style="list-style-type: none"> 1. SK Pathak, Managing Director, Rajasthan State Gas Ltd 2. S C Sharma, Former Advisor Energy, NITI Aayog 3. Amit Mathur, Additional General Manager, IGL 	
Part 2: EMERGING TRENDS AND NEW OPPORTUNITIES IN NATURAL GAS VEHICLES	
Key Topics	
1. What are the emerging trends and developments in the natural Gas Vehicle Market?	
2. What are the technologies/ Equipment options being deployed? What has been the experience so far?	
3. What are the key challenges and issues?	
Speakers:	
<ol style="list-style-type: none"> 1. Ranjan Dwivedi, Managing Director, Central UP Gas Ltd. 2. Piyush Tripathi, Senior Vice President, Adani Gas 3. Ashish Chutani, Dept Head- Government and Policy Affairs, Maruti Suzuki India Ltd* 4. Amitabh Ranjan, DGM, GAIL* 5. KK Gandhi, Advisor, TVS* 6. PK Banerjee, ED, SIAM* 	
Session Coordinator: Aashima Chaney , ISGF	Contacts: aashima@indiasmartgrid.org +91 98717 52530

SMART WATER DISTRIBUTION

 India Smart Grid Forum	 THE CENTRE	 MINISTRY OF JAL SHAKTI DEPARTMENT OF WATER RESOURCES RIVER DEVELOPMENT & GANGA REAJVENATION	 DWR WATER	 Central Board of Irrigation and Power	 Central Board of Irrigation and Power
Organizer	Supporting Partner	Supporting Ministry	Supporting Organization	Supporting Organization	Session Partner

Regency 1, The Lalit Hotel, New Delhi
06 MARCH 2020, 11:30 TO 16:30

DRAFT AGENDA	
Time: 11:30~12.15	INAUGURAL SESSION
<p>Welcome Address: ISGF</p> <p>Special Address:</p> <p>R.K Jain, Chairman, Central Water Commission*</p> <p>Subodh Yadav, Joint Secretary, Ministry of Jal Shakti</p> <p>Inaugural Address: Raghav Chadha, Vice Chairman, Delhi Jal Board*</p> <p>Vote of Thanks: V K Kanjlia, Secretary, CBIP, and Treasurer, ISGF</p>	
Time: 12:15~13:30	SESSION 1: WATER DISTRIBUTION SYSTEM IN THE DIGITAL ERA: CHALLENGES, OPPORTUNITIES AND SOLUTIONS
<p>Background</p> <p>Water is a critical resource that lies at the heart of social and economic growth. Water is essential for survival, and its absence can impact the health, food security, and livelihoods of families across the world. India's water resources are under immense pressure due to declining per capita water availability, lack of storage capacity, and spatial and temporal variation. The pressure stated above is due to a plethora of reasons ranging from anthropocentric to climate-induced reasons. In recent years, decreasing per capita average annual water availability in the country has become a cause for concern, especially since India has already been categorized as a 'water-stressed', as per the United Nations classification. Also, the issue of water contamination is also rapidly increasing due to large-scale, unplanned urbanization and untreated effluents emitted by industries.</p> <p>Key Topics</p> <ol style="list-style-type: none"> 1. Non-Revenue Water (NRW) Management 2. Water Governance, Corporate Approach and Private Sector Participation 3. Policy Maker's perspective 	
Chair: DP Mathuria , ED, NMCG	<p>Moderator: Ajay Pradhan, President and CEO, C2S2</p> <p>Contact:</p>
<p>Speakers:</p> <ol style="list-style-type: none"> 1. Bharat Lal, Additional Secretary, (Water) Department of Drinking Water and Sanitation Ministry of Jal Shakti 2. Ajay Shankar, Distinguished Fellow, TERI 3. S Bharghava, Former Member, DJB* 4. Arun Lakhani, Chairman & Managing Director, Vishvaraj Infrastructure, Mumbai 	
Time: 13:30~14:30	NETWORKING LUNCH
Time: 14:30~16:00	SESSION 2: WATER RESOURCE UTILIZATION: FUTURE STRATEGY, INNOVATIONS & NEW APPROACH FOR EMERGING TECHNOLOGIES
<p>Key Topics</p> <ol style="list-style-type: none"> 1. Quality Monitoring from Origin to Consumption 2. Data from IoT Devices for Monitoring and Controlling 3. Smart City Data Management- use cases on Machine Learning and Advanced Analytics 4. Innovations in Water Technology 	
Chair: G Asok Kumar , Mission Director, National Water Mission	<p>Moderator: Neville Bhasin, Business Developer, Forbes Marshall</p> <p>Contact: 9823295678</p>
<p>Speakers:</p> <ol style="list-style-type: none"> 1. Sanjoy Roy, CEO, Orange City Water Pvt Ltd 2. Abbha Sargaonkar, Sr Principal Scientist, NEERI 	

3. **Sourav Daspatnaik**, Managing Director, Swach Environment Pvt Ltd., Director, PPP projects including Delhi Jal Board and Haldia Development Authority
4. **Jagdish Kr. Arora**, Chief Engineer (WW) Delhi Jal Board, Delhi Govt
5. **R.P Singh**, VP, Strategic Partnership, Smart Energy Water
6. **Ali Hosseini**, CEO, SenRa

Time: 16:00~16:30	SESSION 3: CLOSING REMARKS
Session Coordinator: Aashima Chaney , ISGF	Contacts: aashima@indiasmartgrid.org +91 98717 52530

PRESENTATION OF SELECTED TECHNICAL PAPERS

Regency 5, The Lalit Hotel, New Delhi

06 MARCH 2020, 11:00 TO 16:30

AGENDA (DRAFT)		
Time: 10:50~11:00	INAUGURAL SESSION	
Welcome Address: ISGF		
Time: 11:00~12~40	THEME 1: FOUNDATION BLOCKS FOR SMART GRIDS	
Chair: G Ganesh Das, COO – Clean Energy International Incubation Centre and Head - Collaborations and Smart Grid Lab, Tata Power-DDL		
Time	Technical Paper	Author
11:00 ~ 11:10	ENEDIS, France IoT Smart Grid Solutions for more Efficiency	Laurent Karsenti, ENEDIS, France
11:10 ~ 11:20	IElectrix H2020 Project – SHAKTI Demonstration	Pierre-Jacques LE QUELLEC, ENEDIS, France
11:20 ~ 11:30	Smart Grid and Utility Challenges	PT Seenath Beevi, Kerala SEB
11:30 ~ 11:40	India Moving Towards Solar Energy	Purnima M. Gupta, CEA
11:40 ~ 11:50	Hybrid Microgrid Set up in Laboratory for Practical Alimentation of Electrical Engineering Students	Rahul Singh, Aligarh Muslim University
11:50 ~ 12:00	Communications Solutions for Smart Grids and Smart Meters	Sanjeev Rana, Tata Power Delhi Distribution Limited
12:00 ~ 12:10	A Framework for Microgrid Power Management in Developing Communities	Ashok K Das, SunMoksha Power Pvt. Ltd.
12:10 ~ 12:20	Indian Power Sector: Current Stance on Topmost Disruptive Trends in Smart Grid Industry and Roadmap for Sustaining Growth Amidst Them	Shweta Agarwal, Landis+Gyr
12:20 ~ 12:30	Exploring Alternative Energy Sources to Supplement and Cover the Downtime of Wind and Solar to Improve the Resilience of Smart Grids	Srinivasa Murthy Lolla, Bio Electrical & Energy Systems
12:30 ~ 12:40	Smart Meter Data Enabled Transition to Energy Efficient Cooling (Video Presentation)	Shalu Agrawal, Council on Energy, Environment and Water
Time: 12:40 ~ 13:40	NETWORKING LUNCH – REGAL (1 ST FLOOR)	
Time: 13:40~14:30	THEME 2: E-MOBILITY AND ENERGY STORAGE	
Chair: Girish Ghatikar, ISGF and EPRI		
13:40 ~ 13:50	Minimized Operational Cost and Enhanced Battery Life in Solar, Battery and Building Integrated EV Charging Station	Bharat Gupta, Vision Mechatronics
13:50 ~ 14:00	Pooling Electric Vehicles and Residential Systems for Ancillary Services – Concept and Demonstration	Fabian Niedermeyer, Fraunhofer IEE
14:00 ~ 14:10	AGC in a Deregulated Interconnected Power System with STATCOM and Battery Energy Storage	Rajesh Joseph Abraham, Indian Institute of Space Science and Technology
14:10 ~ 14:20	Revenue Modelling of the Electric Vehicle Charging Infrastructure in India - A case study of Delhi NCR	Shinjini Singh, Tata Power Company Limited
14:20 ~ 14:30	Electric Vehicle Infrastructure Planning for Indian Distribution Sector	Tripta Thakur, Maulana Azad National Institute of Technology, Bhopal
Time: 14:30~16:20	THEME 3: EMERGING TRENDS AND DISRUPTIVE INNOVATIONS	
Chair: N Murugesan, Former DG, CPRI		
14:30 ~ 14:40	Standards and Interoperability of Equipment and Systems	Amit Jindal, PwC
14:40 ~ 14:50	Cyber Physical Security of Critical Infrastructure	Aamir Hussain Khan, TPDDL
14:50 ~ 15:00	Rise of Algorithmic Trading in Today's Changing Electricity Market	Anindya Pradhan, Tata Consultancy Services
15:00 ~ 15:10	Explainable Artificial Intelligence (XAI): Towards Malicious SCADA Communications	Harditya Sarvaiya, VJTI
15:10 ~ 15:20	Grid Security	Kshama Joshi, Accenture Technology Center India
15:20 ~ 15:30	Tariffs a Tool to Create Flexibility	Magnus Linden, SWECO
15:30 ~ 15:40	Blockchain Technology Application to DER Implementation Strategy for India	ML Sachdeva, NS Sodha
15:40 ~ 15:50	Transforming Campuses into Grid Interactive Buildings Using PEER Strategies	Sanjay Kumar, Green Business Certification Inc.
15:50 ~ 16:00	Power Quality Improvement & Performance Enhancement of Permanent Magnet Brush-less DC Motor	Saurabh Manglik, Jacobs Engineering

16:00 ~ 16:10	Improving Revenue Assurance Theft Detection to a New Technology Landmark	Rui Mano , Choice Technologies
16:10 ~ 16:20	Empowering Energy Efficiency Deployments with Blockchain	Christopher Peoples , Energy Blockchain Consortium
Session Coordinator: Balasubramanyam Karnam, ISGF		Contacts: bala.k@indiasmartgrid.org +91 81212 76498

**WORKSHOP ON OPTIMIZING ELECTRICITY GRIDS BY DISTRICT ENERGY SYSTEM INTEGRATION – IN
COLLABORATION WITH APUEA
Regency 4, The Lalit Hotel, New Delhi
06 MARCH 2020, 11:30 TO 16.30**



AGENDA (DRAFT)

Background

56 percent of the world's population lives in urban areas by 2020 and 80 percent of the world's energy is consumed here. The urban population in Asia-Pacific will grow by 16 percent between 2020- 2030, and by 2050 more than half of the world's urban population will be in the Asia- Pacific region. Cities in emerging economies, where 95 percent of population growth to 2030 and beyond will occur, will account for the majority (70 percent) of global growth in energy use through 2030. For instance, according to 2018 Global Status Report, the energy needed for cooling buildings will triple by 2050 – a growth equivalent to the current electricity demand in the USA and Germany combined. Governments throughout the region struggle to keep pace with the growing demand for energy infrastructure while striving to meet the requirements for livable and environmentally sustainable cities. It is safe to say that the development of sustainable urban energy, complemented by other enabling systems of provision is crucial to combat climate change. Cities can be climate-solvers and can help countries in Asia-Pacific to achieve their international climate commitments.

Key Topics

1. District Energy Developments Global and Indian Scenario
2. Integrated Energy Applications: Smart Grids – Peak Load Shaving - Energy Storage - Demand Side Response (DSR)
3. Developing, Financing and Managing Energy Utilities

Time: 11:50~12:40

PART 1: DISTRICT ENERGY DEVELOPMENTS-Global and Indian Scenario

Chair: RR Mehta, Former CEO, Reliance Energy

Moderator: Sanjay Dube, IIEC

Contact:

Speakers:

1. **Mikael Jakobsson**, Asia Pacific Urban Energy Association (APUEA)
2. **SP Garnaik**, EESL, TBC
3. **Benjamin Hickman**, UN District Energy in Cities Initiative (UN DES), Video
4. **Disha Sharma**, International Energy Agency (IEA)
5. **Sudheer Peerla**, Tabreed

TIME: 13:20~14:10

PART 2: INTEGRATED ENERGY APPLICATIONS: SMART GRIDS – PEAK LOAD SHAVING - ENERGY STORAGE - DEMAND SIDE RESPONSE (DSR)

Chair: Arbind Prasad, Chairman, Jharkhand ERC

Moderator: Peter Lundberg, APUEA

Contact:

Speakers:

1. **Akshay Mangal**, Broad
2. **Santhosh Muzumbar**, Johnson Controls
3. **Rahul Tongia**, Brooking Institution & India Smart Grid Forum
4. **Nitesh Mishra**, ABB*
5. **Jignesh Rawat**, Danfoss*

Time: 14:10~14:40

LUNCH

Time: 14:50~15:40

PART 3: DEVELOPING, FINANCING AND MANAGE ENERGY UTILITIES

Moderator: Mikael Jakobsson, APUEA

Contact:

Speakers:

1. **Teruhisa Oi**, Asian Development Bank
2. **Sanjay Dube**, International Institute for Energy Conservation
3. **Markus Wypier**, GIZ
4. **Rajeev Sharma**, VP Engineering and Construction, GIFT City, Gujarat*

Session Coordinator:

Anand Singh, ISGF

Contacts:

anand@indiasmartgrid.org | +91 9925218036

**ROUNDTABLE ON INTERCONNECTION OF REGIONAL GRIDS IN ASIA: SAARC GRID –
GCC GRID - ASEAN GRID**



**Regency 3, The Lalit Hotel, New Delhi
06 MARCH 2020, 14:00 to 16:30 PM**

AGENDA (DRAFT)	
Supporting Partner	USAID SARI/EI (https://sari-energy.org/)
Background	
<p>A roundtable session was conducted on the topic “Interconnection of Regional Grids in Asia: ASEAN SAARC/BIMSTEC-GCC Grids” on 15th March 2019 in New Delhi as part of ISUW 2019. The roundtable was attended by key stakeholders from GCC, SAARC/BIMSTEC and ASEAN regions. The participants expressed interest on the concept and discussed various aspects of the Pan Asian Grid Interconnectivity. The technological, economic, environmental and social benefits were discussed in detail. The feasibility of various options and points of interconnections were looked into. Two potential interconnections were identified: (i) Oman-Gujarat undersea HVDC cable link and; (ii) Manipur-Myanmar-Thailand overhead line.</p> <p>A regional power market can only be functional in an interconnected regime. There is a regional power exchange already operational in the GCC region. There are domestic power exchanges operational in India. Efforts are on to initiate exchange based regional trade in the SAARC and ASEAN regions. Establishment of a South Asian Regional Power Exchange (SARPEX) has been recommended. The establishment of a regional power exchange in the very near future in the ASEAN region is also likely. The power market/exchange can start as a split market with the trades between various interconnected countries and regions conducted separately. As more and more interconnectors are built, these split markets can be coupled in steps. Physical infrastructure and the power market operating on the physical infrastructure needs to be coordinated to build and utilize the same in an optimal manner. All the power trades to be executed on sound commercial basis. This roundtable will discuss the following key topics:</p>	
<ol style="list-style-type: none"> 1. Review of Status of Interconnection of grids in ASEAN, SAARC/BIMSTEC and GCC regions 2. Identified Interconnections 3. Feasibility Study for the Identified Interconnections 4. Next Steps 	
Chair: SK Rahate, Additional Secretary, MoP	
Speakers:	
<ol style="list-style-type: none"> 1. Mohammad Hossain, DG, BPDB, Bangladesh 2. Ghanshyam Prasad, Chief Engineer, MoP* 3. Ujjwal Deep Dahal, Director, Druk Holding & Investments (DHI), Bhutan 4. SR Narasimhan, Director – System Operation, POSOCO 5. Hitendra Dev Shakya, Managing Director, NEA Engineering Company, Nepal 6. Rohan Seneviratne, Deputy General Manager, Ceylon Electricity Board, Sri Lanka 7. Pankaj Batra, Project Director, IRADe 8. Eddie Widiono, Chairman, PJCI, Indonesia 9. Michael Williamson, Section Chief- Energy Division, UN ESCAP (<i>On Video</i>) 10. Mohammad Abdullah Al-Drazi, GCCIA, Saudi Arabia* 11. Sunil Wadhwa, Advisor, IPPAI 12. Harry Dhaul, DG, IPPAI* 13. RK Chauhan, Director – Projects, Power Grid Corporation of India* 14. Rajesh K Mediratta, Director (Business Development) at IEX 15. Rajiv Mishra, Director, PTC India* 16. BB Mehta, Chief Engineer (SLDC), GETCO 	
Session Coordinator:	Contacts:
Shuvam Sarkar Roy, ISGF	shuvam@indiasmartgrid.org +91 98749 69066

MASTER CLASSES

TRACK-1: TECHNOLOGIES ENABLING ENERGY TRANSITION: DIGITALIZATION

Regency 1&2, The Lalit Hotel, New Delhi

03 MARCH 2020, 09:30 TO 17:30

AGENDA (DRAFT)	
<p>Background</p> <p>Energy transition is a pathway towards transformation of the global energy sector from fossil-based to zero-carbon and digitalization is facilitating this transformation story through the use of information and communication technology. This transition also paves the way for more consumer participation as well as optimum usage of decentralized resources because of which more human machine collaboration at user end is coming into play and energy efficiency and conservation becoming a priority. For example, Smart meters are capable of two-way communication between power producers and consumers, and are the basis for “smart grids,” which can detect and instantly react to local changes in generation and demand, increasing efficiency and flexibility. Similarly, artificial intelligence (AI) might also prove crucial as energy “prosumers” will connect their distributed resources to the grid, downloading and uploading energy according to need, with potential payment for their surplus supply. More extensive technology take-up will mean even greater data generation. AI will sweep through this data at a rapid rate, pinpointing patterns of behavior and making accurate predictions on energy demand and much more. This provides an uninterrupted supply of energy solutions, all of which work together to enable the transition to net zero emissions in India.</p>	
<p>SESSION 1 Time: 09:30~13:00</p>	<ol style="list-style-type: none"> 1. Digital Consumers 2. AMI and Utility Transformation – Different Use Cases 3. Asset Management through Advance Analytics
<p>Tutors:</p> <ol style="list-style-type: none"> 1. Anant Venkateswaran, ISGF 2. Ajoy Rajani, ISGF 	
<p>Time: 13:00~14:00</p>	<p>NETWORKING LUNCH - PRE-FUNCTION AREA OF REGENCY</p>
<p>SESSION 2 Time: 14:00~17:30</p>	<ol style="list-style-type: none"> 1. Cybersecurity in the Digital Age 2. Cloud – The Enabler for Digitalization 3. An Introduction to AI, Machine Learning, and Big Data and their Impacts on the utility 4. Unlocking the “Fifth Fuel” - Increased Energy Efficiency with Machine Learning and Big Data
<p>Tutors:https://go.insideplus.abb.com/news/details/56988/us-welcomes-our-new-ceo-bjorn-rosengren</p> <ol style="list-style-type: none"> 1. Andrew Ginter, VP, Industrial Security at Waterfall Security Solutions, Canada 2. Anant Venkateswaran, ISGF 	
<p>Session Coordinator: Suddhasatta Kundu, ISGF</p>	<p>Contacts: s.kundu@indiasmartgrid.org +91 96744 46886</p>

TRACK-2: TECHNOLOGIES ENABLING ENERGY TRANSITION: E-MOBILITY**Regency 3, The Lalit Hotel, New Delhi****03 MARCH 2020, 14:00 TO 17:30**

AGENDA (DRAFT)	
<p>Background</p> <p>India has launched a number of schemes and initiatives to stimulate and expedite the adoption of Electric Vehicles (EVs) in the country such as the 'National Electric Mobility Mission Plan (NEMMP) 2020', followed by the introduction of the scheme named 'Faster Adoption and Manufacturing of (Hybrid and) Electric Vehicles (FAME India)'. The FAME-II, an extension of the FAME scheme, was launched in 2019.</p> <p>Eighteen state governments have released final (or draft) versions of electric vehicle policies for their respective states. Twelve states and one union territory have also introduced separate EV tariff. Bureau of Indian standards (BIS) issued IS: 17017-Part-1, 21, 23 and 24, related to EV charging equipment. Several other policy initiatives have been taken by Ministry of Power, Department of Heavy Industries, NITI Aayog and Ministry of Road Transport and Highways.</p> <p>This course will cover EV policies and programs in India vis-a-vis what are leading countries in the world. Introduction to EV charging infrastructure, standards and communication technologies.</p>	
SESSION 1 Time: 09:30~11:00	1. Global EV Deployment 2. EV Technologies 3. International Best Practices
<p>Tutor:</p> <p>1. Girish Ghatikar, Senior Program Manager- EPRI, California, USA, and Chair of ISGF Working Group</p>	
Time: 11:00~11:30	TEA/COFFEE BREAK
SESSION 2 Time: 11:30~13:00	1. Electric Vehicle Charging Infrastructure 2. Vehicle to Grid Integration 3. Enhancement and Health Management
<p>Tutors:</p> <p>1. Lonneke Driessen-Mutters, Executive Director, Open Charge Alliance 2. Reji Kumar Pillai, President, India Smart Grid Forum</p>	
Time: 13:00~14:00	NETWORKING LUNCH - PRE-FUNCTION AREA OF REGENCY
Session Coordinator: Anand Singh, ISGF	Contacts: anand@indiasmartgrid.org +91 99252 18036

TRACK-3: ADVANCED CYBER SECURITY
Regency 3, The Lalit Hotel, New Delhi
03 MARCH 2020, 09:30 TO 13:30

AGENDA (DRAFT)	
Background	
Security has become a crucial factor for the success and wide deployment of smart grid networks. A cyber-attack on the power grid could result in complete disruption of all activities in the society it can cause electrical blackouts and breaches of national security secrets. It is a growing concern and a key success factor for reliable power distribution. According to an IT Governance Report, there were more than 1.7 billion data breaches and cyber-attacks in January 2019 alone. A cyber-attack can have far-reaching implications including financial losses, theft of intellectual property, and loss of consumer confidence and trust. Cybercrime affects society in a number of different ways, both online and offline.	
SESSION 1 Time: 14:00~16:00	1. Attack Patterns 2. Defenses and Their Limitations
Moderator: Anant Venkateswaran, ISGF	Contact: anantven@yahoo.com
Tutor: 1. Andrew Ginter , Vice President, Waterfall Security Solutions, Canada	
Time: 16:00~16:30	TEA/COFFEE BREAK
SESSION 2 Time: 16:30~17:30	1. Designs for High-Threat Environments
Tutor: 1. Andrew Ginter , Vice President, Waterfall Security Solutions, Canada	
Session Coordinator: Anand Singh, ISGF	Contacts: anand@indiasmartgrid.org +91 99252 18036

TRACK-4: TECHNOLOGIES ENABLING ENERGY TRANSITION: ENERGY STORAGE SYSTEMS (ESS)

Regency 3, The Lalit Hotel, New Delhi

03 MARCH 2020

AGENDA (DRAFT)	
Background	
India's renewable energy (RE) target of 175 GW (including 40 GW RTPV Solar) target by 2022 is well on track – having achieved 87 GW by January 2020. ISGF undertook detailed studies and estimated 17 GWh of battery energy storage systems (BESS) requirements for integration of 175 GW of RE to the grid by 2022. Besides this, BESS required for other stationary applications such as data centres, telecom towers, UPS and inverters, DG replacement and etc., is calculated at 121 GWh making an aggregate requirement of 138 GWh for stationary applications. Electric Vehicles (EVs) would require another 40 GWh of BESS during the same period, up to 2022. This session will discuss key topics listed below.	
SESSION 1 Time: 09:30~13:00	<ol style="list-style-type: none"> Battery Technologies for Grid Storage and Electric Vehicles Energy Storage Systems Roadmap for India: 2019-2032
Tutors:	
<ol style="list-style-type: none"> Arumugam Manthiram, Director, Texas Materials Institute, Materials Science and Engineering Graduate Program, The University of Texas, Austin, USA (On Video) Ravi Seethapathy, Chair of ISGF Working Group and Chairman, Biosirus Inc., Canada 	
Time: 13:00~14:00	NETWORKING LUNCH - PRE-FUNCTION AREA OF REGENCY
SESSION 2 Time: 14:00~17:30	<ol style="list-style-type: none"> Manufacturing of Energy Storage Systems in India Value Streams and Business Case for Energy Storage: Impact of Power Market Design and Regulation Battery Requirements for Electric Mobility in India Storage Projects: International Best Practices and Lessons for India
Tutors:	
<ol style="list-style-type: none"> Rahul Walawalkar, President – India Energy Storage Alliance (IESA) 	
Session Coordinator: Shuvam Sarkar Roy , ISGF	Contacts: shuvam@indiasmartgrid.org +91 9874969066

IEC – IEEE World Smart Energy Standardization Coordination Workshop

Jointly Organized By



Regency 4, The Lalit Hotel, New Delhi

03 MARCH 2020, 10:00 TO 17:00

DRAFT AGENDA	
Time: 10:00~10:45	INAUGURAL SESSION
Welcome Address: Reji Kumar Pillai, President, ISGF	
Purpose of IEC-IEEE Standardization Co-ordination:	
<ol style="list-style-type: none"> 1. Stephen Duttall, Technical Officer and SyC SE Secretary, IEC 2. Srikanth Chandrasekaran, Sr. Director, Standards and Technology, IEEE 	
Inaugural Address: Jayanta Roy Chowdhury, Scientist-G & DDG, Standardization-Products & Methods, BIS	
Time: 10:45~11:15	NETWORKING TEA BREAK
Time: 11:15~12:15	SESSION 1: ELECTRIC VEHICLES INFRASTRUCTURE: UTILITY CHALLENGES
Speakers:	
<ol style="list-style-type: none"> 1. Rajeev Sharma, Scientist F & Head (Electrotechnical Department), Bureau of Indian Standards 2. Abhishek Ranjan, Additional Vice President and Head Renewable, DSM & EE and Energy Analytics, BSES Rajdhani Power Limited 3. Lonneke Driessen-Mutters, Executive Director, Open Charge Alliance 4. P V Mathew, Scientist-E, ETD & Member Secretary ETD-51, Bureau of Indian Standards 	
Time: 12:15~13:00	SESSION 2: RENEWABLE CHALLENGES
Speakers:	
<ol style="list-style-type: none"> 1. PK Agarwal, Director, POSOCO 2. Abhishek Ranjan, Additional Vice President and Head Renewable, DSM & EE and Energy Analytics, BSES Rajdhani Power Limited 	
Time: 13:00~14:00	NETWORKING LUNCH – REGAL (1st FLOOR)
Time: 14:00~14:45	SESSION 3: LVDC STANDARDIZATION CHALLENGES
Speakers:	
<ol style="list-style-type: none"> 1. IEEE LVDC Standardization: Rajesh Kunnath, Founder, Radio Studio 2. IEC LVDC Standardization: Vimal Mahendru, President, Legrand-India 	
Time: 14:45~16:00	SESSION 4: PANEL DISCUSSION - SMART INFRASTRUCTURE CHALLENGES: STANDARDIZATION PERSPECTIVE
Chair & Moderator: Kishor Narang, Chairman, LITD-28, BIS committee on Smart Infrastructure	Contact: kishor@narnix.com
Panellist:	
<ol style="list-style-type: none"> 1. Stephen Duttall, Technical Officer and SyC SE Secretary, IEC 2. Amarjeet Kumar, Founder & CEO, Shrama Technologies Pvt Ltd 3. Arun Kumar Mishra, Director, NSGM and Co-Chair, ISGAN 4. Tulika Pandey, Director, NeGD DEITY, Ministry of Electronics and Information Technology 5. Ganesh Das, COO – Clean Energy International Incubation Centre, Tata Power-DDL 6. Purushottam Kaushik, Head- Strategy, Special Initiatives - L&T Smart World and Communications 7. Deepak Pandey, Operations Leader, GE Software Solutions - South Asia 8. Ashish Tandon, Director-Sales & Marketing, Landis+Gyr India 	
Time: 16:00~16.15	NETWORKING TEA BREAK – EXHIBITION PAVILION
Time: 16:15~16:45	OPEN HOUSE
Time: 16:45~17:00	CLOSING REMARKS
Reji Kumar Pillai , President, ISGF	
Session Coordinator: Balasubramanyam Karnam, ISGF	Contacts: bala.k@indiasmartgrid.org +91 81212 76498