



India SMART GRID Week 2015

International Conference and Exhibition
on Smart Grids and Smart Cities

March 02 - 06, 2015

Bangalore International Exhibition Centre
Bengaluru, India

www.isgw.in

CONFERENCE AGENDA



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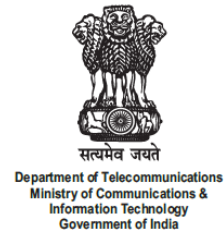
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AGENDA - 02 March 2015

9.30-17:30 JW Marriot Bengaluru	US-India Smart Grid Workshop sponsored by USTDA
08:30 – 09:30	Registration for ISGW 2015 at Bangalore International Exhibition Centre (BIEC)
9:30 – 18:00 Smart Grid Tutorial & Master Classes: BIEC	
9:30 – 11:00 (GULMOHAR)	Introduction to Smart Grids: Rahul Tongia, Brookings India & Pradeep Kumar Yemula, IIT-H
11:00 – 11:30	Tea Break
11:30 - 13:00 (GULMOHAR)	Communication Technologies for Smart Grids and Smart Cities – Ajoy Rajani, Reliance Infra & Kishore Narang, Narnix
13:00 – 14:00	Lunch Break (Lagoon Area)
14:00 - 18:00	MASTER CLASSES (Parallel Tracks)
GULMOHAR	1) IEC 61850 by Christoph Brunner , Chair of IEC Working Group on 61850 in TC-57
CASSIA	2) Cyber Security by M. Zaki, NCIIPC, N. P. Singh, NCIIPC, Faruk Kazi, VJTI, Hem Thukral, ISGF
HIBISCUS	3) Energy Storage Technologies by Rahul Walawalkar, IESA & Akshay Ahuja, ISGF
PARIJATHA	4) Smart Microgrids by Terry Mohn, General Microgrids Inc & C. Amritha, ISGF
15.30 – 16.00	Tea Break

AGENDA - 03 March 2015

08:30 – 09:30	Registration for ISGW 2015	
Session Time	Session Details	
09:30 – 11:00	Inaugural Session	
GULMOHAR	Welcome Address: Pankaj Kumar Pandey , Managing Director, BESCOM	
	Special Address: Richard Schomberg , Chairman of Technical Committee of ISGW 2015	
	Special Address: Ravi Kumar , Additional Chief Secretary – Energy, Govt of Karnataka	
	Special Address: Sandy Sheard , Counsellor and Head - Energy, Climate & Growth Unit, British High Commission, New Delhi	
	Special Address: A.K. Mittal , Head – Telecommunications Engineering Centre	
	Presentation of highlights of the Knowledge Paper: Colin McKerracher , Bloomberg New Energy Finance	
	Release of Knowledge Paper on “Smart Grids in India” by the Chief Guest	
	Inaugural Address by the Chief Guest: Devendra Chaudhry , Special Secretary, Ministry of Power	
	Invitation to ISGW 2016: Praveer Sinha , CEO & ED, Tata Power Delhi Distribution (Host Utility)	
	Vote of Thanks: ISGF	
11:00 – 11:15	Inauguration of Exhibition by Chief Guest (Hall: JACARANDA)	
11:15 – 11:30	Tea Break	
11:30 – 13:00	Plenary Session – 1: Smart Grid Projects Update, Lessons Learnt, Business Models and Key Emerging Trends	
GULMOHAR	Chair: Devendra Chaudhry , Special Secretary, Ministry of Power	
	A) Developed Countries Perspectives: <ol style="list-style-type: none"> Russell Conklin, US DoE & ISGAN Mark van Stiphout, Deputy Head, Energy Technologies Unit, DG ENERGY, European Commission Hiroshi Kuniyoshi, Executive Director, NEDO Ja-yoon Koo, Ex-Chairman of Regulatory Commission, South Korea B) Developing Countries Perspectives: <ol style="list-style-type: none"> Henry Steingass, Regional Director for South & South East Asia, USTDA Praveer Sinha, CEO & ED, Tata Power Delhi Distribution Ravi Seethapathy, CIGRE 	
13:00 – 14:00	Lunch Break (Lagoon Area)	
Track – A in GULMOHAR	Track A: Future Electricity Grid Supporting Low Carbon Energy Supply and Energy Security	Track B: Smart Energy – Vision for the Smart Grid Evolving Towards Smart Customers and Smart Cities /Communities
	Session A1: Smart Generation and Integration Chair: Tarun Kapoor , Joint Secretary, MNRE	Session B1: Smart Energy Market Design & Regulatory Support Chair: U.K. Panjiar , Chairman, Bihar Electricity Regulatory Commission
	A1.1 Large-Capacity Renewable Energy Generation and Integration Challenges, PV Tariff Design and Way-forward: Owen R. Zinaman , NREL, USA A1.2 Distributed Generation: M. Rajagopalan , Market Development Director – Middle East Asia, Wartsila India	B1.1 Introduction: Requirements for a Market Design supporting Smart Energy: Sudeen G Kelly , Partner – Akin Gump & Former Commissioner, FERC B1.2 Integration of Distributed Generation Into An Unbundled Market: Christopher Villareal , California PUC B1.3 Demand Response market (NegaWatt) potential in India: Christopher Hickman , CEO, Innovari Inc

	<p>A1.3 Protection and Control of Integrated Smart Generation: Sivakumaran Govindarajan, Hindel Power</p> <p>A1.4: Beyond AMI- From Smart Meters to Advanced Distribution Automation: Aitor Arzuaga, Laura Marron & Jon Garcia de Salazar, CG Automation</p> <p>A1.5: IEC 61850 supporting Distributed Generation and Storage: Christoph Brunner, Chair of IEC Working Group on 61850 in TC-57</p>	<p>B1.4 Model Smart Grid Regulations in India: Vijay Sonavane, Advisor, MERC & Vikas Gaba, KPMG</p> <p>B.1.5 Envisioning Smart Grid Policy, Regulatory and Technical Framework: Ujjwal Deep Dahal, Bhutan Power Corporation</p> <p>B1.6 Role of Microgrids in India's Smart Grid Framework – Regulatory Support: Larisa Dobriansky, General Microgrids</p>
15:30 – 16:00	Tea Break	
16:00 - 16:30 CASSIA	Presentation on IESS2047 by Yeshika Malik , Consultant, NITI Ayog, & Akshay Ahuja , ISGF	
16:30 – 18:00 CASSIA	Plenary Session – 2: Brainstorming on Spectrum Requirements for IoT and M2M Communications in India Chair: A.K. Mittal , Head – Telecommunication Engineering Centre Panellist: Communication Technology Gurus from several countries	
18:00-18:45 JACARANDA	Networking in the Exhibition Floor	
18:45 – 21:30 GULMOHAR	European Union – India Smart Grids Networking Cocktails (Open to All)	

PARALLEL EVENTS on 03 March 2015

Session Time	Luncheon Session Details
13:00 -16:30 FINE DINING ROOM, First Floor of FOOD COURT	ISGAN Annexe-6 (POWER T&D SYSTEMS) Workshop: Microgrids – A system approach for deployment of renewable energy Workshop Chair: Bo Normark , ISGAN - Chair Annex 6 Expert Panel: <ol style="list-style-type: none"> 1. Terry Mohn, General Microgrids Inc. 2. Ken Hayles, Eskom, South Africa 3. Nick Singh, Eskom, South Africa 4. Anders Lindskog, SP Technical Research Institute of Sweden 5. Rahul Walawalkar, India Energy Storage Alliance
14:00 -15:30	Track D: Technical Paper Presentation
PARIJATHA	Session D1: Chair: Faruk Kazi, VJTI <ol style="list-style-type: none"> 1. Secured Information Exchange In Smart Grid: Deepika Barik, Dibyaraj Krishna Behera, NIT, Rourkela 2. Analysis of adaptive over current protection schemes for active distribution network: Harikrishna M, Sai Sasank K, Dr. Premalata Jena, IIT Roorkee 3. Optimal Energy Scheduling for a Smart Home Integrated with Solar PV and Battery Energy Storage: Batchu Rajasekhar, Naran Pindoriya, IIT Gandhinagar 4. Get smart with Smart Grids: Debasis Mohapatra, PwC 5. Innovative Business Models for Smart Grid Deployments: Sudhanshu Gupta, Soumitra Pandey, E&Y 6. Communication Backbone for the Smart Grid Infrastructure: Narang Kishor, Narnix

AGENDA - 04 March 2015

Session Time	Session Details	
09:30 – 11:00 GULMOHAR	Plenary Session – 3: Smart Grid to Smart Cities and Smart Communities Chair: Raj Vaswani, CTO, Silver Spring Networks <ul style="list-style-type: none"> - Richard Schomberg, IEC Smart Energy Chairman & Vice President, EDF - Brian Spear, Managing Director, Trilliant Asia Pacific - Chandan Chaudhary, Managing Director, Dassault Systemes India - Prashant Pradhan, Director, Smarter Planet Solutions, IBM - Alok Chandna, India, Site Project Leader, Fuji Electric - Case Study of Kitakyushu City, Japan - N. Venu, Head of Power Division, ABB - R. R. Mehta, CEO, Reliance Infra 	
11:00 – 11:30	Tea Break	
11:30 – 13:00	Track A: Future Electricity Grid Supporting Low Carbon Energy Supply and Energy Security Session A2: Evolving Integrated Grid with Distributed Generation Chair: Varsha Joshi, Joint Secretary, MNRE	Track B: Smart Energy – Vision for the Smart Grid Evolving Towards Smart Customers and Smart Cities /Communities Session B2: Smart Cities & Smart Homes and other Emerging Technology Trends Chair: Tom Rowlandsree, Bloomberg New Energy Finance
Track – A in GULMOHAR Track-B in CASSIA	A2.1 Introduction: Tools for Forecasting, Scheduling and Dispatch of distributed generation; Renewable Energy Monitoring Centres etc.: Christophe ARNOULT (NICE GRID Coordinator) A2.2 Renewable Energy Sources & Distributed Generation Resources - Challenges to Transmission System Operators and Distribution System Operators: Ravi Seethapathy , Smart Grid Canada A2.3 Energy Storage solutions for Grid Stability: Rahul Walawalkar , IESA A2.4 Smart Grids with WAMS & Synchrophasor Technology: N.S. Sodha , Ex-ED, Power Grid	B2.1 Internet of Things strategies for the Sustainable Smart City - Building an IPv6 Communications Canopy for the future: Bjorn Lindblom , CEO, Connode B2.2 Intelligent Connectivity as Fabric of Smart Cities: Lalitha Suryanarayana , Qualcomm Technologies B2.3 Evolution of the Smart Customer in Smart Cities: Rupendra Bhatnagar , SAP B2.4 New Technology Trends: Girish Ghatikar , LBNL B2.5 Case Studies: Barcelona Smart City - Sandeep Pathak , Schneider Electric India & ISGF BoG Member
13.00 - 14.00	Lunch Break (Lagoon Area)	
14.00 - 15.30	Track A: Future Electricity Grid Supporting Low Carbon Energy Supply and Energy Security Session A3: Smart Distribution - Evolution of the Distribution Grid Chair: Jean Francois Faugeras, VP-EDF	Track B: Smart Energy – Vision for the Smart Grid Evolving Towards Smart Customers and Smart Cities / Communities Session B3: Smart Customer Chair: B.N. Sharma, Joint Secretary, Ministry of Power, India
Track – A in CASSIA Track-B in GULMOHAR		

	<p>A3.1 Increasing the intelligence of the Distribution Grid to integrate distributed generation: Jean Francois Faugeras, VP-EDF</p> <p>A3.2 Data Analytics for increased intelligence of Distribution Grid: Jim Connaughton, C3 Energy</p> <p>A3.3 Consequences of distributed generation for distribution networks: Laurent Schmitt, Alstom Grid</p> <p>A3.4 Smart Micro Grids – Why so relevant for India?: Terry Mohn, General Microgrids, USA</p> <p>A3.5 Nanogrids: Ashok Das, SunMoksha Power</p>	<p>B3.1 Don't Leave Your Customers Behind - Learn How to Unlock Smart Meter Value for Consumers: Adam Welsh, OPOWER</p> <p>B3.2 E-mobility and EV infrastructure solutions for India: Rajit Gadh, SMERC, UCLA</p> <p>B3.3 Empowering the Smart Consumer: Shiv Kaushik, Cyan Technologies</p> <p>B3.4 Smart Metering with TVWS & Cloud: Prashant Shukla, National Technology Officer, Microsoft India</p> <p>B3.5 Customer Engagement through Gamification: Anindya Pradhan, Krishna Prasad et al, TCS</p>
15:30 – 16:00	Tea Break	
16:00 – 18:00 GULMOHAR	<p>Plenary Session – 4: International Collaboration, Joint Research, Development and Deployment Projects to bring down costs</p> <p>Chair: Agnese Cecchini, Editorial Director, Gruppo Italienergia, Italy</p> <ul style="list-style-type: none"> - IEC: Frans Vreeswijk, General Secretary & CEO - ISGAN: Russel L .Conklin - NEDO: Hiroshi Kuniyoshi, Executive Director - GSGF: Paddy Turnbull, Chairman (on Video) - CIGRE: Ravi Seethapathy - Financing of Smart Grid Projects: Lee Burrows, Managing Director, Vantage Point 	
18:00 –18:15 GULMOHAR	Screening of Documentary film by Energy Department of Odisha “Battling in Darkness”	
18:15 – 19:00 JACARANDA	Networking Break and Exhibition Visit	
19:00 – 22.00 LAGOON AREA	Cocktails, Cultural Program & Dinner	

PARALLEL EVENTS on 04 March, 2015

Session Time	Session Details
11:30-15:30 FINE DINING ROOM First Floor of FOOD COURT	<p>Luncheon session - “Smart Regulations for Smart Grids” for Regulators and Policy Makers</p> <p>Inauguration by Hon’ble Minister of Energy, Govt of Karnataka, Sh. D. K. Shivakumar</p> <p>Speakers and Topics:</p> <ol style="list-style-type: none"> 1. Model Smart Grid Frameworks to support positive regulatory change to new technologies: Suedeem G.Kelly, Partner – Akin Gump & Former Commissioner, FERC 2. Regulatory Examples from around the world to enable the Demand side. A discussion of many different countries and regulations and to see what has worked and what has not worked: Christopher Hickman, CEO, Innovari Inc 3. Market Structures – How are the different markets working? From fully unbundled to vertically integrated, where have electricity grids been able to provide higher levels of reliability while maintaining affordable cost?: Paul Feldman, Director (and past Chairman), MISO

	<ol style="list-style-type: none"> Regulatory implications of amendments proposed in the Electricity Act 2003: Vijay Sonavane, Advisor, MERC Regulations for Separation of Carriage and Content - Experiences and Recommendations: Balawant Joshi, Managing Director, Edam Infra How the market views utility investments in Smart Grid?: Lee Burrows, Managing Director, Vantage Point
11:30-13:00	Track D: Technical Paper Presentation
PARIJATHA	<p>Session D2: Ganesh Das, Tata Power Delhi Distribution</p> <ol style="list-style-type: none"> Considerations in Standardization for Demand Response Ready Air Conditioners in India: Nihar Shah, Girish Ghatikar, Nikit Abhyankar, Amol Phadke, LBNL Smart Metering and Demand Response: Sujay Kumar Saha, Vikas Arora, TPDDL Smart Metering Technology: The Evolving Economy of Smart Distribution: Priyamvada Chandel, Tripta Thakur, B.A. Sawale, CPRI Bhopal Study of DC Microgrid Accompanying with Renewable Energy Sources for Rural Application: Tathagata Sarkar, Tathagata Sarkar, Hiranmay Saha & Konika Das Bhattacharya, IEST Shibpur The Grid+ project: connecting smart grid initiatives in the future European electricity grid: Pieter Vingerhoets & Kristof May, Energyville; Ronnie Belmans & Patrick Turnbull, GSGF Monitoring and analysis of Oscillations in Southern Regional grid: Sudeep M, T Muthukumar & S. P. Kumar, POSOCO
14:00 -15:30	Track D: Technical Paper Presentation
PARIJATHA	<p>Session D3: V.Shivakumar, CPRI</p> <ol style="list-style-type: none"> Practical Approach to Predictive Analytics using IoT/Big Data – Asset Fitness Center: VSSN Srinivasa Murthy, B Sivarama Krishnan, Bahwan CyberTek Application of PHEVs for smart grid in Indian power sector: Eshwar Pisalkar, Parita Bhojani, Abhijeet Pathade, UPES Best Practices in Smart Metering Policy and Implementation: Apoorv Nagpal, Vivek Dhariwal, EVI Carefully designed Smart Grid / Metering programs can resolve developing world's unique challenges: Sudhanshu Gupta, Soumitra Pandey, E&Y Dynamic Energy Management on Smart Micro Grid: Prasanna Vadana D, Sasi K Kottayil, Amrita University Leveraging AMI for Enhanced and Improved OMS: Sandeep Pathak, Schneider Electric

AGENDA - 05 March 2015

Session Time	Session Details	
9:30 – 11:00 GULMOHAR	Plenary Session – 5: Emerging Technologies that New India should embrace for the Big Leap! Chair: Rahul Tongia , Advisor to ISGF and Non-Resident Fellow, Brookings India <ol style="list-style-type: none"> 1. Amory Lovins, Rocky Mountain Institute (on Video) 2. Chris Hickman, Innovari, Inc. 3. Hiroshi Ishiguro, Director of Intelligent Robotics Laboratory, Osaka University (on Video) 4. Raj Vaswani, CTO, Silver Spring Networks 	
11:00 – 11:30	Tea Break	
11:30 – 13:00	Technical Session-C: Cross Cutting Themes	Track B: Smart Energy – Vision for the Smart Grid Evolving Towards Smart Customers and Smart Cities /Communities
Track – C in GULMOHAR Track - B in CASSIA	Session C1: Standards and Inter-operability Chair: Richard Schomberg , IEC Smart Energy Chairman & Vice President, EDF C1.1 Smart Grids Standardization Roadmap by EU: European Commission – Laurent Schmitt , Alstom Grid & Smart Grid Coordination Group, CEN/CENELEC-ETSI/ SGCG C1.2 Smart Grid Architecture supporting Interoperability: Erfan Ibrahim , The Bit Bazar LLC (on Video) C1.3 Smart Grid Standardization Efforts in India: D.Goswamy , BIS C1.4 World Smart Energy Harmonization: Richard Schomberg , IEC C1.5 National Standards for Power Quality: Sujeet Mishra , RDSO, Indian Railways	Session B4: Smart Grid Communications and Cyber Security Chair: Paul de Martini , Managing Director, New Port Consulting Group, USA B4.1 Communication Standards for Interoperability: Phil Beecher , Wi-SUN Alliance B4.2 Last Mile Connectivity Solutions for Smart Grids and challenges in India: Ajoy Rajani , Reliance Infra B4.3 Cyber Security for Smart Grids : Sachin Burman , Director, NCIIPC, India B4.4: Distribution System – Automation Technologies and its Cyber Security: Vijayan S.R. , ABB B.4.5 Cyber Security for emerging Technologies & Smart Utilities: Manish Tiwari , Chief Information & Security Officer, Microsoft India
13:00 – 14:00	Lunch Break (Lagoon Area)	
14:00 – 16:00	Track A: Future Electricity Grid Supporting Low Carbon Energy Supply and Energy Security	Track C: Cross-cutting Themes
Track – A in GULMOHAR Track- C in CASSIA	Session A4: Smart Metering Chair: Colin McKerracher , Bloomberg New Energy Finance A4.1 Rollout challenges - worldwide experiences and lessons: BNEF Presentation A4.2 Global Technology Trends: Eric Dresselhuys , Silver Spring Networks A4.3 India's Smart Metering Market: Rahul Tongia , ISGF A4.4 Smart Metering Case Study: Francesco Marini , Enel, Italy	Session C2: Smart Grid Projects – Case Studies Chair: Girish Ghatikar , LBNL C2.1 Large Scale EU Demonstration for Integration of Renewable and Smart (or grid) automation: Christophe ARNOULT , NICE GRID Coordinator C2.2 Spotlight on Smart and Strong Electric Power Infrastructure: Bo Normak , Susanne Ackeby , ISGAN C.2.3 Characterization and Effectiveness of Technologies for India's Electric Grid Reliability and Energy Security: Girish Ghatikar , Ranjit Deshmukh , Rongxin Yin , LBNL & Ganesh Das , Tata Power Delhi Distribution

	A4.5 Unlocking the value of Smart Meters with Behavioural Science: Adam Welsh , OPOWER	C2.4 Effective Customer Engagement for Smart Grid Project Success: Eco Grid EU and Nice Grid project examples: Rémy GARAUE VERDIER , GRID4EU Coordinator
16:00 – 16:30	Tea Break	
16:30 – 17:30 GULMOHAR	Closing Ceremony of Conference and Exhibition Chair: N. Murugesan , DG, CPRI Panellists: Session Chairs	

PARALLEL EVENTS on 05 March, 2015

Session Time	Session Details
11:30-15:30 FINE DINING ROOM First Floor of FOOD COURT	Special Luncheon session and launch of ISGF's Smart Utilities Group (SUG) SUG is a voluntary forum for utilities to share their experiences and learn from each other on smarter initiatives and implementation of new technologies. Agenda: Introduction and launch of SUG <ol style="list-style-type: none"> 1. Election of a Chair for SUG 2. Finalization of framework for SUG functioning 3. Electricity Act 2003 Amendment (proposed) – Challenges to Regulators and Utilities: Vijay Sonavane, Advisor, MERC 4. ISGF Presentation: Changes in Business Processes and IT Systems of Discoms with separation of Carriage and Content as envisaged in the Electricity Act 2003 Amendments: Rupendra Bhatnagar, General Secretary, ISGF
11:30-13:00	Track D: Technical Paper Presentation
PARIJATHA	Session D4: Md.Umar Hashmi, IIT-B <ol style="list-style-type: none"> 1. Energy Access in South Asia: Incubating Innovation in Rural Electrification through Off-grid Solutions: Abhijith Jayanthi, Sonnergie UG, Munich 2. Fast Identification of Fault Location with Fault Passage Indicators under Network Reconfiguration: Pradeep Kumar Yemula, Viplav Chaitanya, IIT Hyderabad 3. Open Automated Demand Response: Industry Value to Indian Utilities and Knowledge from the Deployment: Rajesh V. Poojary (Honeywell), Girish Ghatikar (LBNL), Ganesh Das (TPDDL) 4. Power Management of a Hybrid Microgrid: Md. Umar Hashmi (IIT-B), Jayesh G. Priolkar, (Goa University)
14:00-15:30	Track D: Technical Paper Presentation
PARIJATHA	Session D5: Narang Kishore, Narnix <ol style="list-style-type: none"> 1. High availability automation network in Digital Substation using PRP and HSR redundancy protocol: Suraj Kumar Pardeshi (CG Global R&D Center) 2. An Assessment of a Cost-effective Demand Response Scenario A case study for Jordan: Eg. Mazen alnabulsi, Ibrahim Hasasn(NEPCO) 3. Real-Time Control Of Power Distribution using LT and HT Smart Grid Switches: G.V.Sukumara, Ashwin K. Gonibeed(PRAPATI Chennai & New York) 4. Simulating a Connected Micro-Smart Grid: Himank Shanker, Amit Garg, Mayank Tibrewala, Shreya Chandra Shekar, Jyoti Maheshwari(IIM Ahmedabad) 5. Estimation of Potential and Value of Demand Response for Industrial and Commercial Consumers in Delhi: Ranjit Deshmukh, Rongxin Yin, G. Ghatikar(LBNL) 6. Automating LV Distribution Networks using sensor technologies: Jayant Sinha(ENZEN GLOBAL)



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