



02 – 06 March, 2015 | Bengaluru, India

Event Background

The emergence of India as a strong economic power is receiving widespread recognition in the world. On the other hand, although we operate the fourth largest power system in the world, one-third of our population have no access to electricity and our percapita consumption of electricity is one-fourth of the world average! Transmission and Distribution losses in India are also quite high - about 26% in distribution and more than 7% in transmission. Government of India (GoI) and other stakeholders have realized that by implementing incremental improvements in a business as usual scenario we will not be able to provide 24x7 electricity to all households in the country - it requires innovative strategies, breakthrough technologies and bold decisions. In 2013, GoI issued Smart Grid Vision and Roadmap for India; and the newly elected Government in India is committed to provide 24x7 electricity to all households in next 5 years and has recently launched 3 focused programs towards this objective with a total capital outlay of US\$ 14 billion. The new Government has also announced ambitious programs to build 100 Smart Cities on fast track and add 150 GW of renewable energy (100 GW solar and 50 GW wind) generation capacity by 2022! With all these ground breaking initiatives, India has already emerged as the prime destination for Smart Grids and Smart Cities.

INDIA SMART GRID WEEK (ISGW) 2015 is the first edition of the Conference and an Exhibition that will be organized by **India Smart Grid Forum** (a public private partnership initiative of Ministry of Power, Government of India) with the support of several ministries, government institutions, non-government institutions and multi-lateral agencies from India and overseas.

Main Objectives of the Event

- Position India as an important emerging market for smart grid and smart city products and services to the international technology companies.
- Provide exposure for utilities, regulators and policy makers in Indian power sector on smart grid technologies, matured solutions and emerging technology trends for the near future.
- Bring World's top most thought leaders in energy sector to share their views on development needs and future technology trends that India could leverage to provide clean energy access to over a billion people.
- Provide a platform for networking and knowledge and technology transfer amongst:
 - Indian utility professionals with their overseas peers who have already implemented smart grid technologies and smart city solutions.
 - Indian industry professionals with overseas technology companies for collaborations and business partnerships.
 - Researchers, consultants and students in India to meet with experts from the industry, academia and research from overseas.
 - Indian technology companies to showcase their products and solutions to potential clients from India and overseas to generate new ideas.
 - Technology start-ups to showcase their products and solutions to potential investors and clients.





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Structure of ISGW 2015

(Conference and Exhibition Venue: Bangalore International Exhibition Centre)

- **02 March 2015: (1) SMART GRID TUTORIAL & MASTER CLASSES , (2) USA-India Smart Grid Workshop sponsored by USTDA (by invitation only)**
- **03 March 2015: Inauguration of the Conference and Exhibition**
- **04 March 2015: Conference and Exhibition**
- **05 March 2015: Conference and Exhibition**
- **06 March 2015: Site Visits – 4 visits are proposed. Delegates, Speakers and Exhibitors may choose according to their preferences:**
 1. Visit to Smart Grid Pilot Project in Mysore (including historical landmarks in Mysore City)
 2. Visit to Southern Regional Load Dispatch Centre (SRLDC) in Bangalore and Control Room of Bangalore Electricity Supply Company (BESCOM) and Central Power Research Institute (CPRI)
 3. Tour of India's Silicon Valley – visits to campuses of some of India's largest IT companies based in Bangalore - **THIS TOUR IS OFFERED ON 02 MARCH 2015 ALSO**
 4. Bangalore City Tour (including Nandi Hills)

(Please note that on 06 March 2015, **Holi**, the festival of colours is celebrated in India and touring around Bangalore and Mysore City will be great fun!)

Besides the above program, several side events with international development agencies such as EBTC, NEDO, USTDA, USIBC etc are planned during 02-05 March 2015.

Visionary Speakers at ISGW 2015

Several Nobel Laureates and Great Thinkers / Scientists have been invited as Visionary Speakers in the Special Plenary Sessions at ISGW 2015 and many of them have confirmed their participation.

Technical Papers

ISGW 2015 call for papers has received 133 Technical Papers. All shortlisted papers will be published and selected papers will be presented in the relevant technical sessions/Technical Papers Presentation Tracks.

Results

Results of ISGW will be a set of recommendations to key decision makers in Government of India, state governments, regulatory commissions and utilities on way-forward to effectively leverage evolving technologies for developing smart grids and smart cities in India.





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Partners



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India SMART GRID Week 2015

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Media Partners





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EVENT DAY 1: 02 March 2015

1. SMART GRID TUTORIAL & MASTER CLASSES from 9.30 am to 5.30pm
2. U.S.-India Smart Grid Workshop sponsored by USTDA from 10am to 5.30 pm followed by cocktails and Dinner (by invitation only)

EVENT DAY 2: 03 March 2015

Session Time	Session Details	
09:30 – 11:00	Inaugural Session (90 Min)	
	<ul style="list-style-type: none"> – Welcome Address: ISGF – Special Address: Secretary, Ministry of Power, Govt of India* – Special Address: H.E. Ambassador of European Union to India * – Special Address: H.E. Ambassador of Japan to India * – Special Address: H.E. Ambassador of United States of America to India * – Special Address: H.E. High Commissioner of U.K* – Special Address: H.E. Ambassador of Germany* – Special Address: Minister of Energy, Govt of Karnataka* – Keynote Address: Shri. Piyush Goyal, Minister of State (I/C) for Power, Coal and New and Renewable Energy, Govt of India* – Presentation of highlights of the Knowledge Paper: Bloomberg New Energy Finance – Release of Knowledge Paper by the Chief Guest – Inaugural Address by the Chief Guest: Shri Narendra Modi, Prime Minister of India* – Vote of Thanks 	
11:00 – 11:15	Inauguration of Exhibition by Chief Guest	
11:00 – 11:30	Tea Break	
11:30 – 13:00	Plenary Session – 1: Smart Grid Projects Update, Lessons Learnt, Business Models and Key Emerging Trends Chair: Secretary – Ministry of Power, Govt of India* <ul style="list-style-type: none"> - USA: <i>Russell Conklin, ISGAN</i> - Europe: <i>Marcelo Masera, Director General, Joint Research Centre, European Commission</i> - Japan: <i>Hiroshi Kuniyoshi, Executive Director, NEDO</i> - China: <i>Shu Yinbiao, President, State Grid Corporation of China*</i> - S.Korea: <i>Ja-yoon Koo, Ex-Chairman of Regulatory Commission</i> - UK: <i>Neil Bush, DECC*</i> - Developing Countries Perspectives: <i>Ravi Seethapathy, Smart Grid Canada</i> 	
13:00 – 14:00	Lunch Break	
14:00 – 15:30	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





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	Session A1: Smart Generation and Integration Chair: Tarun Kapoor, Joint Secretary, MNRE	Session B1: Smart Energy Market Design & Regulatory Support Chair: Chairperson, CERC/India *
	A1.1 Large-Capacity Renewable Energy Generation and Integration Challenges and Way-forward : NREL, USA* A1.2 Distributed Generation: Nandakumar Pai, Managing Director, Wartsila India A1.3 Protection and Control of Integrated Smart Generation (KEMA/ABB/Schneider/GE) A1.4 Select papers from Call for Papers Sponsoring Organizations	B1.1 Introduction: Requirements for a market design supporting Smart Energy: Sudeen G Kelly, Former Commissioner, FERC, USA B1.2 Integration of distributed generation into an unbundled market: Christopher Villareal, California PUC * B1.3 Demand Response market (NegaWatt) potential in India: Chris Hickman, Innovari Inc B1.4 Model Smart Grid Regulations in India: Vijay Sonavane, Advisor, MERC
15:30 – 16:00	Tea Break	
16:00 – 18:30	Plenary Session – 2: MODI ERA – India’s Big Leap to Modernity? Moderated by: Narendra Taneja, Convenor of BJP’s Energy Cell <ol style="list-style-type: none"> Jeffery D.Sachs, Director – Earth Institute, Columbia University (on Live Video) Daniel Poneman, Senior Fellow, Belfer Center for Science and International Affairs, Harvard University (formerly Deputy Secretary of Energy, US Dept of Energy)* Michel Porter, Author and Professor, Harvard University* Elon Musk, Founder, SpaceX, Tesla and Paypal* Thomas Picketty, Professor, Paris School of Economics and Author of Capital in The 21st Century* Robert Lanza, Scientist & Author of Biocentrism* 	
18:30 – 20:30	Networking Cocktails	

EVENT DAY 3: 04 March 2015

Session Time	Session Details	
09:30 – 11:00	Plenary Session – 3: Smart Grid to Smart Cities and Smart Communities Chair: Mr. Shankar Agarwal, Secretary, Ministry of Urban Development, Govt of India <ul style="list-style-type: none"> Jesse Berst, Chairman, Smart Cities Council* Richard Schomberg, EDF Anil Menon, CISCO* Neil Jacobstein, Co-Chair of Artificial Intelligence & Robotics, Singularity University, USA* Representative of Kitakyushu City, Japan* Rep of WUXI City, China* 	
11:00 – 11:30	Tea Break	
11:30 – 13:00	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 A2: Smart Transmission - Network	Session B2: Smart Cities & Smart Homes and other emerging technology trends



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	Stability and Operation <i>Chair: S.K.Negi, MD, GETCO*</i>	<i>Chair: Tom Rowlandsree, Bloomberg New Energy Finance</i>
	A2.1 Introduction: Tools for Forecasting, Scheduling and Dispatch of distributed generation; Renewable Energy Monitoring Centres etc. A2.2 Energy Storage solutions for grid stability: <i>Rahul Walawalkar, IESA</i> A2.3 Select Paper from Call for Papers/ experts from sponsoring organizations A2.4 Worldwide industrial efforts for Transmission grid of the future: <i>Yu Yun, Director, State Grid Corporation of China*</i> A2.5 Green Corridor project in India/ PGCIL	B2.1 Challenges and Opportunities in 100 Smart Cities program in India: <i>MoUD Presentation</i> B2.2 Smart Grids as Anchor Infrastructure to build Smart Cities at marginal cost : <i>ISGF Presentation</i> B2.3 How to achieve Smart Cities/Communities under high urbanization pressure: <i>Madhav Pai, Director, World Resources Institute*</i> B2.4 New Technology Trends: <i>Girish Ghatikar, LBNL</i> B2.5 Case Studies/ Select papers from Call for Papers/ Experts from sponsoring organizations - <i>Lavasa City/Palava City, India</i>
13.00 - 14.00	Lunch Break	
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 <i>Chair: Jean Francois Faugeras, VP-EDF</i> A3.1 Increasing the intelligence of the Distribution Grid to integrate distributed generation: <i>Jean Francois Faugeras, VP-EDF</i> A3.2 Data Analytics for increased intelligence of Distribution Grid: <i>Jim Connaughton, C3 Energy</i> A3.3 Consequences of distributed generation for distribution networks: <i>Laurent Schmitt, Alstom Grid</i> A3.4 Smart Micro Grids – Why so relevant for India?: <i>Terry Mohn, General Microgrids, USA</i> - Select Technical Papers	Track B: Smart Energy – Vision for the Smart Grid Evolving Towards Smart Customers and Smart Cities /Communities Session B3: Smart Customer <i>Chair: B.N.Sharma, Joint Secretary, Ministry of Power, India</i> B3.1 Unlocking the value of Smart Meters with Behavioural Science: <i>Alex Lasky, Founder & Chairman – OPOWER</i> B3.2 Smart Homes, Smart Buildings: <i>Select Technical Papers/Sponsoring Organizations</i> B3.3 E-mobility and EV infrastructure solutions for India: <i>Prof. Rajit Gadh, SMERC, UCLA</i> B3.4 Electric Bicycle Revolution: <i>Ed Benjamin, LEVA*</i> B3.5 Case Studies - Leveraging Social Media for Consumer Engagement: <i>ISGF Study Paper</i> - <i>Select Technical Papers</i>
15:30 – 16:00	Tea Break	
16:00 – 18:00	Plenary Session – 4: International Collaboration, Joint Research, Development and Deployment Projects to bring down costs Chair: Agnese Cecchini, Editorial Director, Gruppo Italienergia, Italy	



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	<ul style="list-style-type: none"> - CIGRE: Klaus Frohlich, President* - GSGF: Paddy Turnbull, Chairman - IEC: Frans Vreeswijk, General Secretary & CEO - ISGAN: Michel de Negrin, Chair of Executive Committee*, - NEDO – Hiroshi Kuniyoshi, Executive Director - USTDA: Henry Steingass, Regional Director for South & South East Asia - World Bank/ADB Representative
18:00 – 18:45	Special Dinner Plenary : Myth and Myths - Devdutt Pattanaik, Author and Motivational Speaker*
18:45 – 22.00	Cocktails, Cultural Program & Dinner

Event DAY 4: 05 March 2015

Session Time	Session Details	
09.30 - 11.00	Plenary Session – 5: Emerging Technologies that New India should embrace for the Big Leap! Chair: R.Chidambaram, Principal Scientific Advisor to Govt of India <ol style="list-style-type: none"> 1. Ray Kurzweil, Co-Founder and Chancellor, Singularity University and Director of Engineering at Google - on Live Video 2. Amory Lovins, Rocky Mountain Institute – on Live Video 3. Janine M.Benyus, President, Biomimicry Institute - on Live Video 4. Arun Manjundar, Stanford University* 5. Chris Hickman, Innovari, Inc. 6. Charles Ebinger, Brookings Institution 	
11:00 – 11:30	Tea Break	
11:30 – 13:00	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 A4: Smart Metering <i>Chair: Colin McKerracher, Bloomberg New Energy Finance</i>	Session B4: Smart Grid Communications and Cyber Security <i>Chair: Paul de Martini</i>
	A4.1. Rollout challenges - worldwide experiences and lessons: BNEF Presentation A4.2 Global Technology Trends: <i>Eric Dresselhuys, Silver Spring Networks</i> A4.3 India's Smart Metering Market: <i>Rahul Tongia, ISGF</i> A4.4 Smart Metering Case Study: Francesco Marini, Enel, Italy A.4.5 Smart metering and challenges in India and options/Roadmap: <i>Sponsoring Organizations/Select Technical Papers</i>	B4.1 Communication Solutions and the Digital Architecture for Smart Grids : <i>Simon Pontyn, Itron*</i> B4.2 Communication Standards for Interoperability: Phil Beecher, Wi-SUN Alliance B4.3 Last Mile Connectivity Solutions for Smart Grids and challenges in India: <i>Ajoy Rajani, ISGF</i> B4.4 Cyber Security for Smart Grids : <i>Sachin Burman, Director, NCIIPC</i> B4.5 M2M: Convergence of communications, home automations, entertainment and energy: <i>DoT/TEC/ Select Technical Papers</i>



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13:00 – 14:00	Lunch Break	
14:00 – 20:00	Technical Session – C: Cross-cutting Themes	
	Session C1: Standards and Inter-operability <i>Chair: Richard Schomberg, IEC Smart Energy Chairman & Vice President, EDF</i>	Session C2: Training and Capacity Building <i>Chair: Secretary, Skill Development Ministry, Govt of India (Alternate: CEO, NSDC)</i>
	C1.1 Smart Grids Standardization Roadmap by EU: European Commission – <i>Laurent Schmitt, Alstom Grid & Smart Grid Coordination Group, CEN/CENELEC-ETSI/ SGCG</i> C1.2 Smart Grid Architecture supporting Interoperability: Mark R Knight, Chairman, Gridwise Architectural Council* C1.3 Smart Grid Standardization Efforts in India: <i>BIS/CEA, India</i> C1.4 World Smart Energy Harmonization: <i>IEC Presentation</i>	C2.1 Skill Development - the biggest challenge in India: <i>Ministry of Skill Development Presentation</i> C2.2 Capacity Building for Smart Grids and Smart Cities: <i>ISGF Presentation</i> C2.3 Regulatory Capacity Building: <i>CERC/FOR</i> C2.4 NSDCL and Skill Development Centres - <i>NSDCL</i> C2.5: International Examples: <i>USAID/ DoE; MKE/ S.Korea</i>
04:00 – 04:30	Tea Break	
04:30 – 05:30	Closing Ceremony of Conference and Exhibition	

* Invited and confirmation awaited

PARALLEL EVENTS	
Session Time	Session Details
10:00-17:30	Event DAY 1: 02 March 2015; US-India Smart Grid Workshop sponsored by USTDA (Attendance by Invitation Only) (Agenda under Finalization) Cocktails and Dinner
18.00 - 21.00	
9:30 -11:00	Smart Grid Tutorial and Master Classes 1. Introduction to Smart Grids – Dr.Rahul Tongia & Dr.Pradeep Kumar Yemula 2. Communication Technologies for Smart Grids and Smart Cities – Ajoy Rajani & Kishore Narang
11:30 -13:00	
14:00 -18:00	MASTER CLASSES (Parallel Tracks) a. IEC 61850 by Christoph Brunner, Chair of IEC Working Group on 61850 in TC-57 b. Cyber Security by NCIIPC & ISGF (Dr. Shailendra Fuloria, Sachin Burman, Subodh Belgi) c. Energy Storage Technologies by IESA (Dr. Rahul Walawalkar) d. Smart Microgrids by General Microgrids Inc (Terry Mohn)





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Event DAY 2: 03 March 2015

Session Time	Session Details
11:30-15:30	Special Luncheon Round Table on “ Smart Grid – Opportunities and Challenges in the Gulf countries ” with Senior Policy Makers from Gulf Cooperation Countries - attendance by invitation (Please write to: ronkini.shome@indiasmartgrid.org)
11:30-15:30	Presentation of Technical Papers
11:30-15:30	ISGAN Annexe-6 (POWER T&D SYSTEMS) Workshop

Event DAY 3: 04 March 2015

Session Time	Session Details
11:30-15:30	Luncheon session - “ Smart Regulations for Smart Grids and Smart Cities ” for Regulators and Policy Makers Speakers: <ol style="list-style-type: none"> 1. Sudeen G.Kelly, Former Commissioner, FERC 2. Christopher Villareal, Senior Policy Analyst, California Public Utilities Commission* 3. Balawant Joshi, Partner, Edam 4. Vijay Sonavane, Advisor, MERC
11:30-15:30	Presentation of Technical Papers

Event DAY 4: 05 March 2015

Session Time	Session Details
11:30-15:30	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. For details write to: (ronkini.shome@indiasmartgrid.org)
11:30-15:30	Presentation of Technical Papers

ISGF – TiE - IAN Innovation Hub:

ISGF in collaboration with The Indus Entrepreneurs (TiE) and Indian Angel Network (IAN) is organizing an innovation hub at ISGW 2015 where start-ups and entrepreneurs can exhibit their technologies/solutions to potential investors and clients. Innovation Hub will be at the exhibition floor and will be open on 03-04-05 March 2015. For details write to: reena.suri@indiasmartgrid.org





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Technical Committee for ISGW 2015

1. Mr. Vijay Sonavane, Ex-Member, MERC, Chair of Technical Committee for ISGW 2015
2. Mr. Richard Schomberg, EDF, Co-Chair of Technical Committee for ISGW 2015
3. Mr. Colin Mckerracher, Global Lead - Smart Grid Analysis, Bloomberg New Energy Finance (BNEF), Knowledge Partner
4. Mr. Debdas Goswamy, Bureau of Indian Standards, BIS
5. Mr. L Ravi, General Manager, DAS & SG, Bangalore Electricity Supply Company Limited
6. Mr. N S Sodha, Executive Director, Power Grid
7. Mr. S A Khaparde, Professor, IIT Mumbai
8. Mr. U S Mane, Independent Director, UHVN
9. Mr. Ajoy Rajani, Senior Vice President, Reliance Infrastructure Ltd and BoG Member ISGF
10. Mr. Pradeep Kumar Yemula, Assistant Professor, IIT Hyderabad and BoG Member ISGF
11. Dr. Rahul Tongia, Advisor, ISGF
12. Prof Rajit Gadh, University of California, Los Angeles
13. Dr. Girish Ghatikar, Lawrence Berkeley Laboratory, USA
14. Mr. Terry Mohn, CEO, General MicroGrids, USA
15. Dr. Rahul Walawalkar, Executive Director, India Energy Storage Alliance
16. Mr. Ravi Seethapathy, Director, Smart Grid Canada

Advisory & Organizing Committee for ISGW 2015

1. Mr. Hiroshi Kuniyoshi, Executive Director, NEDO, Japan
2. Mr. N Murugesan, Director General, Central Power Research Institute
3. Mr. Paddy Turnbull, President, Global Smart Grid Federation (GSGF)
4. Mr. Pankaj Kr Pandey, Managing Director, Bangalore Electricity Supply Company
5. Mr. R M Agarwal, DDG(NT), Ministry of Communication & IT, DoT
6. Mr. R R Mehta, CEO Reliance Infrastructure Ltd.
7. Mr. Reji Kumar Pillai, President ISGF
8. Mr. Rupendra Bhatnagar, SAP and Gen. Secy. ISGF
9. Mr. Russel L Conklin, International Smart Grid Action Network
10. Mr. Sachin Dev Sharma, Executive Director, Messe Dusseldorf India
11. Mr. V. K. Kanjila, (CBIP), Treasurer, ISGF

