

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:
 - o Indian utility professionals with their overseas peers who have already implemented smart grid technologies and smart city solutions.
 - o 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.
 - o 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.





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 & ISGAN Annexe#6 Workshop
- 04 March 2015: Conference and Exhibition & a Special Luncheon Round Table on Smart Regulations for Smart Grids and Smart Cities
- 05 March 2015: Conference and Exhibition & Special Luncheon Round Table for Launch of Smart Utilities Group
- 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.





Event Organizers











Organizer

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Utility Partners

Knowledge Partner

Supporting Ministries



सत्यमेव जयते Ministry of Power Government of India



Ministry of New and Renewable Energy Government of India



Ministry of Urban Development Government of India



Department of Telecommunications Ministry of Communications & Information Technology Government of India



Department of Science & Technology Ministry of Science & Technology Government of India

Partners









(U.S. Commercial Service supports the goals of this event, but does not endorse the specific products, or views of the participating organizations)



































Media Partners













































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 (Please register at: regonline.com/indiasmartgridbangalore)

cockta	OCKTAILS (Please register at: regonline.com/indiasmartgridbangalore)				
EVENT DAY 2	Y 2: 03 March 2015				
Session Time	Session Details				
09:30 - 11:00	Inaugural Session (90 Min)				
	Welcome Address: ISGF				
	Special Address: Secretary, Ministry of Power, Govt of India				
	 Special Address: Secretary, Minist 	try of New &Renewable Energy*			
	 Special Address: H.E. Ambassador 	r of European Union to India *			
	 Special Address: H.E. Ambassador 	r of Japan to India *			
	 Special Address: H.E High Commi 	ssioner of U.K*			
	 Special Address: H.E Ambassador 	r of France*			
	 Special Address:Ms Leocadia I. Za 	k,Director USTDA			
	 Special Address: Minister of Energ 	gy, Govt of Karnataka*			
	 Keynote Address: Shri. Piyush Go 	yal, Minister of State (I/C) for Power, Coal and			
	New and Renewable Energy, Gov	t 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					
	Emerging Trends				
	Chair: Secretary – Ministry of Power, Govt of India				
	- USA: Russell Conklin, ISGAN - Europe: Senior Representative of European Commission				
	- Lurope: Semor Representative of European Commission - Japan: Hiroshi Kuniyoshi, Executive Director, NEDO				
	- China: Shu Yinbiao, President, State Grid Corporation of China*				
	- S.Korea: Ja-yoon Koo, Ex-Chairman of Regulatory Commission				
	- Developing Countries Perspectives: Ravi Seethapathy, Smart Grid Canada; Praveer Sinha, Tata				
40.00 11.55	Power Delhi Distribution				
13:00 – 14:00		unch Break			
14:00 - 15.:30	Track A: Future Electricity Grid Supporting	Track B: Smart Energy – Vision for the Smart Grid Evolving Towards Smart Customers and Smart Cities			
	Low Carbon Energy Supply and Energy	/Communities			
	Security	,			





	Session A1:Smart Generation and	Session B1: Smart Energy Market Design &	
	Integration	Regulatory Support	
	Chair: Tarun Kapoor, Joint Secretary, MNRE	Chair: Chairperson, CERC/India *	
	A1.1 Large-Capacity Renewable Energy	B1.1 Introduction: Requirements for a market design	
	Generation and Integration Challenges	supporting Smart Energy: Suedeen G Kelly, Former	
	and Way-forward : NREL, USA*	Commissioner, FERC, USA	
	A1.2 Distributed Generation: Nandakumar	B1.2 Integration of distributed generation into an	
	Pai, Managing Director, Wartsila India	unbundled market: Christopher Villareal,	
	A1.3 Protection and Control of Integrated	California PUC *	
	Smart Generation	B1.3 Demand Response market (NegaWatt) potential	
	(KEMA/ABB/Schneider/GE)	in India: <i>Chris Hickman, Innovari Inc</i>	
	A1.4 Select papers from Call for Papers	B1.4 Model Smart Grid Regulations in India: Vijay	
	Sponsoring Organizations	Sonavane, Advisor, MERC	
15:30 - 16:00		Tea Break	
16:00-16:30	Presentation on IESS2047 by Mr. Anil Jain, Advisor Energy ,Niti Ayog, Gol		
16:30 – 18:30			
Moderated by: Narendra Taneja, Convenor of BJP's Energy Cell		of BJP's Energy Cell	
	1. Jeffery D.Sachs, Director – Earth Institute, Columbia University (on Live Video)		
	2. Michel Porter, Author and Professor, Harvard University*		
	3. Elon Musk, Founder, SpaceX, Tesla and Paypal*		
	•	hool of Economics and Author of Capital in The 21 st	
	Century*		
	5. Robert Lanza, Scientist & Author of E		
18:30 - 20:30	Netw	orking Cocktails	

	: 04 March 2015		
Session Time	Session Details		
	Jesse Berst, Chairman, Smart Cities CouncRichard Schomberg, EDF	Ainistry of Urban Development, Govt of India* cil* Iligence & Robotics, Singularity University, USA*	
09:30 - 11:00	- 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: Evolving Integrated Grid with Distributed Generation	Session B2: Smart Cities & Smart Homes and other emerging technology trends	





	Chair: Dr. Upendra Tripathi ,Secretary,MNRE*	Chair: Tom Rowlandsree, Bloomberg New Energy Finance	
	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: Rahul Walawalkar, IESA A2.3 Renewable Energy Sources & Distributed Generation Resources - Challenges to Transmission System Operators - Challenges to Distribution System Operators A2.4 Select Paper from Call for Papers/ experts from sponsoring organizations A2.5 Green Corridor project in India/ PGCIL	B2.1 Challenges and Opportunities in 100 Smart Cities program in India: MoUD Presentation B2.2 Smart Grids as Anchor Infrastructure to build Smart Cities at marginal cost: ISGF Presentation B2.3 How to achieve Smart Cities/Communities	
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	
	Session A3: Smart Distribution - Evolution of the Distribution Grid Chair: Jean Francois Faugeras, VP-EDF A3.1 Increasing the intelligence of the Distribution Grid to integrate	Session B3: Smart Customer Chair: B.N.Sharma, Joint Secretary, Ministry of Power, India B3.1 Unlocking the value of Smart Meters with Behavioural Science: Alex Lasky, Founder &	
	distributed generation: Jean Francois Faugeras, VP-EDF A3.2 Data Analytics for increased intelligence of Distribution Grid: Jim Connaughton, C3 Energy A3.3 Consequences of distributed generation for distribution networks: Laurent Schmitt, Alstom Grid A3.4 Smart Micro Grids – Why so relevant for India?: Terry Mohn, General Microgrids, USA A3.5 Nanogrids: Dr Ashok Das, Sun Moksha Power	Chairman – OPOWER B3.2 Smart Homes, Smart Buildings: Select Technical Papers/Sponsoring Organizations B3.3 E-mobility and EV infrastructure solutions for India: Prof. Rajit Gadh, SMERC, UCLA B3.4 Electric Bicycle Revolution: Ed Benjamin, LEVA* B3.5 Case Studies - Leveraging Social Media for Consumer Engagement: ISGF Study Paper - Select Technical Papers	
15:30 – 16:00	Faugeras, VP-EDF A3.2 Data Analytics for increased intelligence of Distribution Grid: Jim Connaughton, C3 Energy A3.3 Consequences of distributed generation for distribution networks: Laurent Schmitt, Alstom Grid A3.4 Smart Micro Grids – Why so relevant for India?: Terry Mohn, General Microgrids, USA A3.5 Nanogrids: Dr Ashok Das, Sun Moksha Power - Select Technical Papers	Chairman – OPOWER B3.2 Smart Homes, Smart Buildings: Select Technical Papers/Sponsoring Organizations B3.3 E-mobility and EV infrastructure solutions for India: Prof. Rajit Gadh, SMERC, UCLA B3.4 Electric Bicycle Revolution: Ed Benjamin, LEVA* B3.5 Case Studies - Leveraging Social Media for Consumer Engagement: ISGF Study Paper	





	Deployment Projects to bring down costs Chair: Agnese Cecchini, Editorial Director, Groupo Italienergia, Italy - GSGF: Paddy Turnbull, Chairman - IEC: Frans Vreeswijk, General Secretary & CEO - ISGAN: Russel L. Conklin - NEDO – Hiroshi Kuniyoshi, Executive Director - USTDA: Henry Steingass, Regional Director for South & South East Asia - Senior Representative of World Bank
	- Senior Representative of CIGRE
18:00 -18:45	Special Dinner Plenary: Myth and Mytha - Devdutt Pattnaik, Author and Motivational Speaker*
18:45 – 22.00	Cocktails, Cultural Program & Dinner

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		
	1. Ray Kurzweil, Co-Founder and Cha	ncellor, Singularity University and Director of	
	Engineering at Google - on Live Vid	eo	
	2. Amory Lovins, Rocky Mountain Inst	titute – on Live Video	
	 Janine M.Benyus, President, Biomimicry Institute - on Live Video Arun Manjumdar, Stanford University* 		
5. Chris Hickman, Innovari, Inc.			
11:00 - 11:30	Te	ea Break	
11:30 - 13:00	Technical Session-C: Cross Cutting Theme	Track B: Smart Energy – Vision for the Smart Grid	
		Evolving Towards Smart Customers and Smart	
		Cities /Communities	
	Session C1: Standards and Inter-operability	Session B4: Smart Grid Communications and	
	Chair: Richard Schomberg, IEC Smart Energy	Cyber Security	
	Chairman & Vice President, EDF	Chair: Paul de Martini ,Managing Director, New	
		Port Consulting Group, USA	
	C1.1Smart Grids Standardization Roadmap by	B4.1 Communication Solutions and the Digital	
	EU: European Commission – Laurent Schmitt,	Architecture for Smart Grids : Simon Pontyn, Itron*	
	Alstom Grid & Smart Grid Coordination	B4.2 Communication Standards for	
	Group, CEN/CENELEC-ETSI/ SGCG	Interoperability: Phil Beecher, Wi-SUN Alliance	
	C1.2 Smart Grid Architecture supporting	B4.3 Last Mile Connectivity Solutions for Smart	
	Interoperability: Mark R Knight, Chairman,	Grids and challenges in India: Ajoy Rajani, ISGF	
	Gridwise Architectural Council*	B4.4 Cyber Security for Smart Grids : Sachin	
	C1.3 Smart Grid Standardization Efforts in	Burman, Director, NCIIPC, India	
	India: BIS/CEA, India	B4.5 M2M: Convergence of communications,	
	C4.4 World Smart Energy Harmonization:	home automations, entertainment and energy:	
	IEC Presentation	DoT/TEC/ Select Technical Papers	





13:00 - 14:00	Lun	nch Break	
14:00 – 16:00	Track A:Future Electricity Grid Supporting	Track C: Cross-cutting Themes	
	Low Carbon Energy Supply and Energy		
	Security		
	Session A4: Smart Metering	Session C2: Training and Capacity Building	
	Chair: Colin McKerracher, Bloomberg New	Chair: Sunil Arora, Secretary, Skill Development	
	Energy Finance	Ministry, Govt of India*	
	A4.1. Rollout challenges - worldwide	C2.1 Skill Development - the biggest challenge in	
	experiences and lessons: BNEF Presentation	India: Ministry of Skill Development Presentation	
	A4.2 Global Technology Trends: <i>Eric</i>	C2.2 Capacity Building for Smart Grids and Smart	
	Dresselhuys, Silver Spring Networks	Cities: ISGF Presentation	
	A4.3 India's Smart Metering Market: Rahul	C2.3 Regulatory Capacity Building: CERC/FOR	
	Tongia, ISGF	C2.4 NSDCL and Skill Development Centres -	
	A4.4 Smart Metering Case Study: Francesco	NSDCL	
	Marini, Enel, Italy	C2.5: International Examples: USAID/ DoE; MKE/	
	A4.5 Smart metering and challenges in India	S.Korea	
	and options/Roadmap: Sponsoring		
	Organizations/Select Technical Papers		
16:00 – 16:30	Tea Break		
16:30 – 17:30	Closing Ceremony of Conference and Exhibition	n	

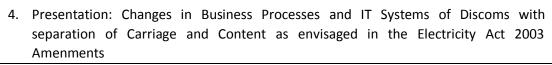
^{*} Invited and confirmation awaited

	PARALLEL EVENTS		
Session Time	Session Details		
10:00-17:30	Event DAY 1: 02 March 2015;		
	US-India Smart Grid Workshop sponsored by USTDA (Agenda under Finalization)		
18.00 - 21.00	Cocktails		
	Smart Grid Tutorial and Master Classes		
9:30 -11:00	1. Introduction to Smart Grids – Dr.Rahul Tongia & Dr.Pradeep Kumar Yemula		
11:30 -13:00	2. Communication Technologies for Smart Grids and Smart Cities – Ajoy Rajani & Kishore Narang		
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)		



Session Time		Session Details	
11:30-15:30	9	Special Luncheon Round Table on "Smart Grid – Opportunities and Challenges in the Gulf	
	C	countries" with Senior Policy Makers from Gulf Cooperation Countries - attendance by	
	i	nvitation (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 M ar	ch 2015	
Session Time		Session Details	
11:30-15:30	Luncheo	n session - "Smart Regulations for Smart Grids and Smart Cities" for Regulators and Policy	
	Makers		
	Speakers	5:	
	1. 5	Sudeen G.Kelly, Former Commissioner, FERC	
	2. (Christopher Villareal, Senior Policy Analyst, California Public Utilities Commission*	
	3. E	Balawant Joshi, Partner, Edam Infra	
	4. \	Vijay Sonavane, Advisor, MERC	
	5. F	Paul Fieldman,Innovari Inc	
	Key topics:		
		Model Smart Grid Regulations with special emphasis on regulations for Time of Use Tariff regime	
		Regulations for Mandatory Demand Response - Experiences and Recommendations	
		Regulations for Separation of Carriage and Content - Experiences and Recommendations	
	4. E	Electricity Act 2003 Amendment (proposed) – Challenges to Regulators and Utilities	
11:30-15:30		Presentation of Technical Papers	
Event DAY 4	: 05 M ar	ch 2015	
Session Time		Session Details	
11:30-15:3	30 S	Special Luncheon session and launch of ISGF's Smart Utilities Group (SUG)	
	s	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:	
	(c.amritha@indiasmartgrid.org)	

1		Election of a Chair for SUG
2	2.	Finalization of framework for SUG functioning
3	8.	Presentation: Electricity Act 2003 Amendment (proposed) – Challenges to Regulators
		and Utilities





Agenda:

Introduction and launch of SUG



11:30-15:30 Presentation of Technical Papers	
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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: akshay@indiasmartgrid.org





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, UHVBN
- 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 Desseldorf India
- 11. Mr. V. K. Kanjila, (CBIP), Treasurer, ISGF

