



ACCELERATING THE ELECTRIC GRID MODERNIZATION IN INDIA

ABOUT ISGF

India Smart Grid Forum (ISGF) is a Public Private Partnership initiative of Ministry of Power (MoP), Government of India for accelerated development of smart grid technologies in the Indian power sector. With 180+ members comprising of ministries, utilities, technology providers, academia and research, ISGF has evolved as a Think-Tank of global repute on Smart Grids and Smart Cities. With Government of India focus on Smart Cities, ISGF has expanded its activities to cover Water distribution, City Gas distribution, E-mobility and other domains of smart cities.



DOMAINS OF EXPERTISE:

-  **Grid Modernization**
-  **E-Mobility**
-  **Smart Metering**
-  **Smart Cities**
-  **RE and Microgrids**
-  **Training and Outreach**
-  **Smart Water and Gas**



KEY OBJECTIVES OF ISGF

-  Lend support to Government, Regulators and Utilities in formulation of Smart Grid Policies, Standards and Technology Rollout Plans for India
-  Study international Smart Grid and Smart City projects and share learnings with Indian Stakeholders through case studies, reports, white papers, technical seminars, etc.
-  Work with Utilities in India to support them in their Smart Grid, Smart City Gas distribution and Smart Water distribution rollout plans
-  Bring key stakeholders and enabling technologies together for successful deployment of smart technologies in India
-  Provide a platform for exchange of ideas and information to support development of use case scenarios for India
-  Conduct research, development and deployment of new technologies

THE ORGANIZATION STRUCTURE OF ISGF:

GENERAL BODY (ISGF MEMBERS)

BOARD OF GOVERNORS (BoG)

MENTORS AND ADVISORS

WORKING GROUPS (WGs)

SECRETARIAT

For details about ISGF Members, Board of Governors, Mentors & Advisors, Working Groups and staff at the Secretariat please visit : http://indiasmartgrid.org/organisational_structure.php

RESEARCH AND STUDIES ON EMERGING TECHNOLOGIES

ISGF has published Research Reports and White Papers on several topics. Some of the popular publications are:



SMART GRIDS

- Joint knowledge paper on Recommendation for Updating India Smart Grid Roadmap 2016 with Accenture at ISGW 2016
- Joint knowledge paper on Smart Grids in India along with Bloomberg New Energy Finance at ISGW 2015
- Smart Grid Projects- A snapshot of Global Smart Grid Projects
- Smart Grid Handbook for Regulators and Policy Makers
- Technology and Economics of Smart Grids and Sustainable Energy (Published in partnership with M/S Springer Nature)
- Educational Film on Smart Grids
- Feasibility study for converting Air Insulated substations to Gas Insulated substations by commercializing the land that would be saved



SMART METERING COMMUNICATIONS

- AMI Rollout Strategy and Cost-Benefit Analysis for India
- Next Generation Smart Metering: IP Metering
- Interoperability in Smart Metering
- Technical Report on M2M Enablement for the Power Sector
- Technical Report on spectrum requirements for low power RF & PLC communications
- Smart Metering Scenario in India



SMART CITIES

- Who is Who Guide in Indian Smart Grid and Smart Cities domains
- Leveraging Smart Grid Assets for Building Smarter Cities at Marginal Cost



ELECTRIC VEHICLES

- Policy Framework for Electric Rickshaws in Delhi
- Electric Vehicles: A sustainable solution to air pollution in Delhi
- Recommendations on Electric Vehicles Charging Infrastructure Standards
- Implementation Plan for Electrification of Public Transportation in Kolkata
- Future of Transportation



SMART MICROGRIDS

- Smart Microgrids for Islands
- Smart Microgrids for large campuses and institutions
- Smart Microgrids for Slums



CUSTOMER ENGAGEMENT

- Leveraging Social Media by Utilities for Effective Customer Engagement
- Customer Engagement Strategies for Panipat Smart Grid Project
- Film on Customer Engagement



CYBER SECURITY

- Indian Manual for Cyber Security in Power Systems



OTHER REPORTS

- Compendium of Training Programs in Power Sector

KNOWLEDGE DISSEMINATION, EXCHANGE AND CAPACITY BUILDING PROGRAMS



INDIA SMART GRID KNOWLEDGE PORTAL (ISGKP)

ISGKP (www.indiasmartgrid.org) launched in January 2013 is one of the most popular portals for all the updates on news about Smart Grids. ISGKP covers latest News from various countries on Events, Conferences, Webinars, Updates on Smart Grid projects, Updates on Smart Technologies, ISGF Whitepapers, ISGF Smart Grid Bulletins (monthly), ISGF Reports, ISGF Presentations, Job opportunities at ISGF and its Members, Training Programs and Workshops by ISGF and various other updates about the activities related to Smart Grids. ISGKP is visited by several thousand visitors monthly from across the globe.



INDIA SMART GRID WEEK (ISGW)

India Smart Grid Week (ISGW) is an International Conference and Exhibition on Smart Grids and Smart Cities. ISGW brings together India's leading Electricity Utilities, Policy Makers, Regulators, Investors and world's top-notch Smart Grid Experts and Researchers to discuss trends, share best practices and showcase next generation technologies and products. The 4th edition of ISGW is scheduled from 05-09 March 2018 at Manekshaw Center, Dhaula Kuan, New Delhi. For more information, visit: www.isgw.in. Email us at: isgw@isgw.in



ISGF SMART GRID BULLETIN

ISGF Smart Grid Bulletin is a monthly Newsletter. About 2,500 printed copies are circulated to key decision makers in Indian power sector in print, and more than 55,000 electronic copies are circulated to power sector professionals around the world. ISGF Smart Grid Bulletin covers key achievements and highlights of Smart Grid developments around the world, Key appointments and transfers, Smart Grid technology and project updates, progress of Smart Grid Project in India, Smart Grid Events and announcement of all the training programs, workshops, competitions and conferences conducted by ISGF. To read all the Issues of Smart Grid Bulletins visit weblink: <http://indiasmartgrid.org/newsletter.php>



INTERNATIONAL COLLABORATIONS

ISGF works with International organizations such as Global Smart Grid Federation (GSGF), Green Business Certification Inc. (GBCI), IEEE, IEC, Open ADR Alliance, Wi-Sun Alliance etc. on knowledge exchange and workshops. ISGF has conducted the following workshops:

- i. India - EU Smart Grid Workshop (held 4 workshops)
- ii. India - Canada Smart Grid Workshop (held 2 workshops)
- iii. India - Sweden Smart Grid Workshop (held 2 workshops)
- iv. India - USA Smart Grid Workshop (held 3 workshops)
- v. India - Norway Smart Grid Workshop (held 1 workshop)



WEBINARS

ISGF conducts fortnightly webinars on latest technologies and case studies in Smart Grid domain with an objective to educate and generate awareness amongst ISGF Members and other stakeholders. At the same time, these webinars are also being used as a platform by ISGF Members and others to announce their new technologies and outreach to smart grid stakeholders. Some of the key topics addressed through webinar are: Cyber security, Energy Storage, Communication Standards, Analytics, AI, Machine Learning, Renewable Energy Integration, Electric Mobility etc. This initiative is very popular with ISGF members.

CORE ACTIVITIES OF ISGF

SUPPORT TO GOVERNMENT INSTITUTIONS AND UTILITIES

ADVISORY SERVICES

DEVELOPMENT OF STANDARDS FOR INDIA

RESEARCH AND STUDIES

KNOWLEDGE DISSEMINATION, EXCHANGE AND CAPACITY BUILDING PROGRAMS

THE DEPARTMENT OF SCIENCE AND INDUSTRIAL RESEARCH (DSIR) APPROVED RESEARCH INSTITUTION

SUPPORT TO GOVERNMENT INSTITUTIONS AND UTILITIES

Key achievements include:

- Formulation of Smart Grid Vision and Roadmap for India issued by Ministry of Power (MoP) in Aug 2013
- Knowledge Partner with NITI Aayog for the India Energy Security Scenario 2047 (Version-1 & 2)
- Assisted MoP in preparation of the Framework for National Smart Grid Mission (NSGM)
- Work with MNRE on Energy Storage and Renewable Energy Integration plans
- Work with Department of Telecommunications on Rollout of IPv6 for Power Sector, a National Telecom M2M Roadmap and development of M2M Communications Roadmap for Power Sector; leading to allocation of 7MHz of licence free spectrum for M2M Communications
- Work with National Critical Information Infrastructure Protection Centre (NCIIPC) on Framework for Cyber Security Preparedness Survey of Electric Utilities; surveyed a sample set of 7 utilities and submitted a high level Top-10 Recommendations to MoP
- Prepared a manual on Cyber Security for Power Systems in collaboration with NCIIPC

Facilitated in arranging Grants for Smart Grid Projects:

- US\$ 15 million grant for Smart Grid Pilot project in Panipat for UHBVN, Haryana from NEDO, Japan
- Grants from USTDA for technology demonstration projects in Reliance - Mumbai, Tata Power-Delhi and CESC Kolkata; and advisory services for a Smart Grid Testbed at CPRI
- Part- Funding for a 5 MW Demand Response project in BESCOM, Karnataka from USAID

Work with Regulators:

- Worked with Stakeholders and MoP on Model Smart Grid Regulations approved by the Forum of Regulators in June 2015
- Formation of Maharashtra Smart Grid Coordination Committee (MAHA-SGCC) in 2012
- Formation of Smart Grid Steering Committee in Odisha under the Energy Department in 2013
- Formation of Smart Grid Consultation Committee in Assam by Assam Electricity Regulatory Commission
- Member of Advisory Committee in Haryana by Haryana Electricity Regulatory Commission
- Issuance of Smart Grid Regulations in several states

ADVISORY SERVICES

- Smart Grid Roadmaps
- Smart Grid Maturity Model (SGMM) Assessments
- Smart Grids for Smart Cities
- Feasibility Reports and Detailed Project Reports for Smart Grid and Smart City Projects
- Development and Evaluation of Proposals and Contracts
- Third Party Inspection and Appraisals of Projects
- Detailed planning for e-mobility

SUPPORT FOR DEVELOPMENT OF STANDARDS FOR INDIA

- Smart Meter Standards (IS 16444 and IS 15959) with BIS
- Creation of BIS ETD 46 Committee for Large Scale RE-Integration to the Grid with BIS and MNRE
- Creation of BIS ETD 51 Committee for Electric Vehicle Charging Infrastructure
- Work closely with International agencies such as IEC, IEEE, Wi-SUN Alliance, ISGAN, GSGFetc.
- Launched IEC - IEEE World Smart Energy workshop series

TRAINING PROGRAMS

ISGF conducts following training programs at frequent intervals:

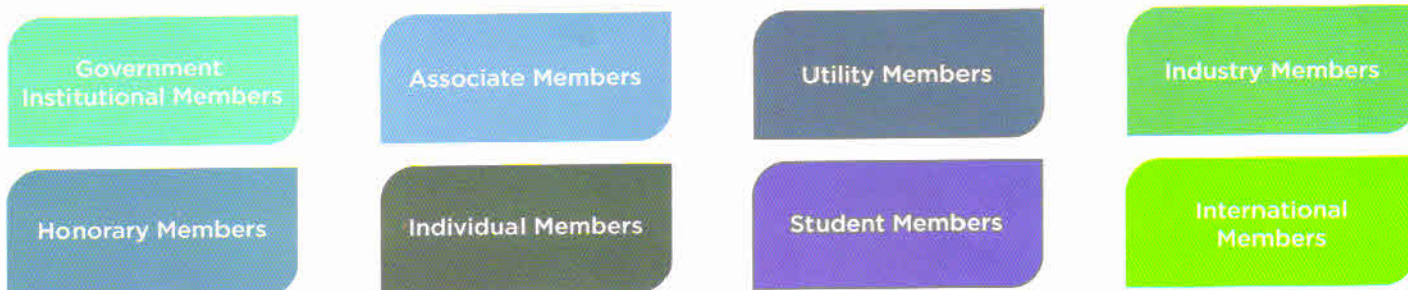
- i. Smart Grid Foundation Course (3 Days)
- ii. Smart Grid Certificate Course (10 Weeks)
- iii. Customer Education Training Programs (2 Days)
- iv. Smart Grid Bootcamp (1 Day)
- v. Cyber Security Workshop (3 Days)
- vi. Regulatory Workshops (3 Days)
- vii. Tailor-made workshops for ISGF Members and Utilities



ISGF MEMBERSHIP

ISGF members are from the ministries, government institutions, regulatory bodies, utilities, industry, non-profit organizations, educational and research entities and students from renowned institutions

MEMBERSHIP CATEGORIES



BENEFITS OF ISGF MEMBERSHIP

Participation in Policy Initiatives for Government of India, State Governments, Regulators and Utilities

- ✱ Contribute towards formulation of national policies and programs related to smart grids, renewable energy and smart cities domains
- ✱ Engage with policy makers, utilities, smart city commissioners/CEOs, regulators, system integrators, OEMs, academia and research; and industry associations in India
- ✱ Participate in development of national standards in India through ISGF in committees of Bureau of Indian Standards (BIS)
- ✱ Contribute towards research reports and white papers prepared by ISGF Working Groups which are often translated to policies and programs
- ✱ Participate actively in the technology sessions and workshops conducted by ISGF, also contribute towards technology topics of common interest - both related to business and also to the need of the country

Advisory Support to Members Organizations

- ✱ Assistance for testing and certification of products in India
- ✱ Assistance for undertaking proof of concept and technology demonstration projects in India
- ✱ Get advance information on smart grid policies and programs
- ✱ Seek guidance for technology and best practices from the panel of experts from academia, industry and utilities

- ✱ Have access to smart grid technology and developments across the globe and participate in international smart grid fora like Global Smart Grid Federation (GSGF), IEC, IEEE, etc.
- ✱ Avail substantial discounts for participation in India Smart Grid Week (www.isgw.in) and other ISGF events, training programs and workshops
- ✱ Participate in major national and international events where ISGF is co-organizer/supporting partner (complimentary registration/substantial discounts in participation fee and exhibition booths for all major events related to utility sectors across the globe)
- ✱ Assistance from ISGF Team in conducting training and capacity building programs
- ✱ Assistance for holding focused workshops with key utility customers and policy makers
- ✱ Get visibility to a larger audience working in the same domain (mainly applicable to start-up companies) and build an ecosystem enabling business activities

Other Benefits

- ✱ Regular promotions through India Smart Grid Knowledge Portal (ISGKP); ISGF Social Media Tools; ISGF Smart Grid Bulletin; and through ISGF Mailing List
- ✱ Support in Recruitment of Professionals
- ✱ Focused Workshops for ISGF Members with utilities and key decision makers

For more details, please visit ISGF website page: <http://indiasmartgrid.org/membership.php>

INDIA SMART GRID FORUM

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