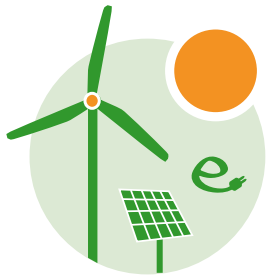


2nd INTERNATIONAL CONFERENCE ON

Large-Scale Grid Integration of Renewable Energy in India



4 - 6 Sept 2019
New Delhi, India



Endorsed by:



GOVERNMENT OF INDIA
MINISTRY OF NEW
AND RENEWABLE ENERGY

CALL FOR PAPERS

If you would like to present a paper at the conference please visit our website: www.regridintegrationindia.org

- To submit a paper, upload an abstract of maximum 3,000 characters (free style) between **25 January & 18 April 2019**.
- Final papers must then be submitted online by **31 July 2019**.
- As the conference language is English, all abstracts have to be written in **English**.
- All participants are responsible for paying their own travel and hotel expenses.
- Conference **registration is free**.

The Conference provides an International Forum to:

- Discuss technical and economic issues of the large-scale integration of solar and wind power including the recent advances in transmission technologies (AC and DC)
- Discuss worldwide project experiences
- Discuss innovative ideas and present results from ongoing research
- Stimulate interdisciplinary thinking between renewable energy and power transmission and distribution industries, as well as universities
- Identify subjects requiring more research efforts

The Government of India has set the very ambitious goal to install 175 GW of renewable energy generation capacity by 2022. Grid integration thus becomes a very critical challenge to successfully accomplish this target. This international conference aims to connect international experts and Indian stakeholders to jointly discuss the latest technological, regulatory and conceptual developments in this field.

www.regridintegrationindia.org

Organized by:



giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH



United States Agency for Inter-
national Development (USAID)
www.usaid.gov

 UK Government

Department for International
Development
[www.gov.uk/government/
organisations/department...](http://www.gov.uk/government/organisations/department...)



Energynautics, Germany
www.energynautics.com

Partner Event of:



Grid Integration Week 2019
www.mobilityintegrationsymposium.org
www.solarintegrationworkshop.org
www.windintegrationworkshop.org

Deutsche Gesellschaft für Inter-
nationale Zusammenarbeit (GIZ)
www.giz.de

TOPICS

PROJECT EXPERIENCE

- World-wide project experience related to Wind Energy/PV/CSP/storage grid connection
- World-wide experience with large-scale integration of Wind Energy/PV/CSP/storage power into power systems
- World-wide experience with balancing power systems with high shares (more than 15% in energy terms) of variable renewable energy (VRE)
- World-wide grid integration experience – the ISO/TSO perspective

POWER MARKET (INCLUDING ANCILLARY)

- Principles of Market design to integrate larger volumes of RE extending to more than 20% - 30% of the energy generation of the country
- Regulatory changes required to enable integration of larger volumes of RE, more than 20% - 30% of the energy generation of the country
- Design concepts for ancillary services with VRE participation
- Evaluation of rules and mechanisms for the integration of wind/PV/CSP/storage in electricity markets
- Role and importance of Aggregators in enabling RE integration and their participation in energy and capacity market
- Examples of enabling fast response ancillary services from Hydro and Storage; also, how market differentiates and assigns value to such response. Issues, challenges, results and learnings from European market coupling examples
- Ancillary services from VRE and Non-VRE sources – world-wide status and experience

POWER SYSTEM STUDIES

- World-wide renewable (Wind Energy/PV/CSP) grid integration studies – methods and results
- Wind/solar integration study methodologies and data requirements

DISTRIBUTION GRID ISSUES

- Protection aspects of wind/PV/CSP/storage
- Voltage control and reactive power management with distributed VRE
- Role of Distribution Utilities/Retail suppliers in integrating distributed VRE
- With more and more DR participation in energy and capacity markets, how are the distribution utilities/retail suppliers integrating that in their planning, load forecasting and grid balancing operations?
- Technology enablement in distribution grid to monitor behind the meter installations for improved load forecasting and planning
- Other emerging topics in management of distribution grid with VRE

TRANSMISSION GRID/POWER SYSTEM ISSUES

- Dynamic line rating/online dynamic security assessment and high temperature overhead lines for the integration of VRE
- Transmission grid planning with high shares of VRE
- Impact of N-1 regulations on power system operation with high shares of VRE
- Conversion of AC power lines to DC lines to increase the capacity to facilitate higher shares of VRE in power systems
- Power system automation and its benefits for VRE integration

WIND & SOLAR MODELLING ISSUES

- How to estimate the value of Storage for integration of RE in the grid through modeling/simulation studies
- How to estimate the value of Hydro for integration of RE in the grid through modeling/simulation studies
- Modelling of inverters and wind/solar power plants for system integration studies (static and dynamic) including methods of testing and verification of compliance with requirements and technologies (on grid side and power plant side) to facilitate integration

POWER SYSTEM BALANCING ISSUES

- Power balancing methods and solutions, e.g. balance markets, to manage VRE variability in power systems
- Flexibility of the conventional power plants
- New power system operation tools and methods for balancing VRE

GRID CODE ISSUES

- World-wide interconnection standards – grid codes for wind turbines, wind power plants, solar systems and solar system models for system planning and interconnection studies
- Compliance testing for grid codes – world-wide status and approach
- Case studies/Necessary Changes in grid code to integrate larger volumes of VRE (more than 20% of overall energy supply)

FORECASTING

- Wind/PV/CSP/storage power monitoring and prediction systems
- State-of-the-art wind/solar resources forecasting, power generation forecasting, applications of forecasting in scheduling and other power system operations and management and opportunities for improvement
- Demand forecast with distributed wind/PV and storage i.e. net demand forecasting in high solar rooftop/ behind the meter installation areas

HYBRID POWER SYSTEMS

- Design and operation of hybrid systems with wind/PV/CSP/storage and their applications/benefits in participating in the energy market

SMART GRID/IT INNOVATIONS

- IT technology applications for the integration of wind/solar power and storage
- Microgrids and other new ideas to increase the share of VRE in power systems
- Virtual power plants and role of VPPs in facilitating RE and integration of RE
- Communication, control and coordination between power plant and power system control centers
- Demand response in smart grid context

ELECTRIC VEHICLES

- Role of Electricity Regulator in enabling the transformation from diesel/gas vehicles to Electric Vehicles
- Role of Distribution Utilities in promotion of EVs and integrating EVs in the distribution grid
- Challenges and issues, if any, in integrating EVs into the grid (both at transmission and distribution voltage)
- Power system planning with EVs