



7th Global Power, Energy and Communication Conference

Bochum/GERMANY

June 11-13, 2025

Special Session on

Smart Grid and Distributed Generation in Renewable Energy

The researches performed for distributed generation (DG) are assessed from a strategic viewpoint due to impending fossil sources and required energy security. Innovative methods in energy generation are rapidly becoming attractive. A robust smart grid that is constituted with various energy sources should also exhibit an operation capability similar to “plug and play”. This term means the integration capability of any additional source connected to existing DG system without requiring any system configuration. There are many ways to integrate conventional and renewable energy sources to build a compact infrastructure. The methods can be classified as dc, ac, and hybrid according to coupling strategy. Unlike the central power generation, DG can be built near the load where the ratings range from several kilowatts up to megawatts that include micro-turbines, solar energy system, wind energy systems (WECS), gas turbines, diesel engines, and so on. Research papers describing new approaches and investigation of the smart grid and DG in renewable energy source applications are suitable for this session

Topics of interest include, but are not limited to:

- ☐ Communication methods applied in smart grid
- ☐ Smart metering applications
- ☐ Advanced metering infrastructure
- ☐ Off-grid, on-tied and micro-inverters
- ☐ Soft-switching high-frequency dc/dc converters
- ☐ Novel dc/dc converter topologies
- ☐ Energy storage systems and transient issues
- ☐ Smart grids and integration of DG
- ☐ Hybrid coupled micro-grid (AC+DC)
- ☐ Energy efficiency in micro-grids
- ☐ Intelligent control of grid-connected converters and inverters
- ☐ Power control methods and algorithms

Organizer(s):

Organizers Names

Affiliations

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Deadlines of the special session:

Full paper submission (maximum 6 pages):	March 30, 2025
Notification of acceptance:	April 27, 2025
Final submissions due:	May 11, 2025

All the instructions for paper submission are included at the conference website.
<https://gpecom.org/2025/guidelines/>