

Special Session 16
Planning, Operation and Control Techniques for Integrated Systems with Distributed Photovoltaic and Cascaded Small-Hydropower Stations

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Scope of the Session:

Under the global warming and severe environmental pressure, developing renewable energy has become the key work in China's energy structure optimization. With constructions of distributed photovoltaic, wind power, small-hydropower and integrated energy systems composed of them, China's renewable energy is growing rapidly. However, due to the natural stochasticity and lacks of planning and management technologies, the waste of wind power and photovoltaic is also increasing in China. Construct integrated energy systems composed of different renewable energy is an effective way to reduce the waste of them, which is advised in the China's 13th Five-Year Planning for Electric Power Development. As the most mature, economical and flexible clean renewable energy, hydropower can be used as the link to promote the absorption of other renewable energy. Studies and practices of integrated energy systems with distributed photovoltaic and cascaded small-hydropower has great significance for building a clean, low-carbon, safe and efficient energy environment, which are in line with the requirements of China's energy development.

The aim of this special session is to provide an opportunity for international researchers to share and review recent advances in integrated energy systems with distributed photovoltaic and cascaded small-hydropower stations. The special session solicits original papers on new findings and applications from researchers, academicians and practitioners from industries.

Topics of interest include, but are not limited to:

- Capacity optimization and access techniques for integrated energy systems with distributed photovoltaic and cascaded small-hydropower stations
- Operation and stability control techniques for integrated energy systems with distributed photovoltaic and cascaded small-hydropower stations
- Technology and equipment development of full-power reversible pumped storage unit with variable speed and constant frequency
- Intelligent dispatching and complementary operation techniques for integrated energy systems with distributed photovoltaic and cascaded small-hydropower stations
- Engineering practices of integrated energy systems with distributed photovoltaic and cascaded small-hydropower stations