

Special Issue

Recent Advances toward Carbon-Neutral Power System

Message from the Guest Editor

The integration of renewable energy sources (RES) and storage system to power systems plays a significant role in the carbon-neutral society. On the other hand, most RES are uncertain and variable sources. The integration of a high share of RES requires smart grids, which are intelligent and digitized power systems optimally distributing electricity among prosumers. In this regard, the future smart grids must be secure, reliable, resilient, cost-efficient and market-based while integrating different energy sectors through one market and engaging the customer as central actors. Topics welcome to this Special Issue include but are not restricted to the following:

- Power system assessment in the presence of variability and uncertainty
- Modeling and analysis of power system performance with a high share of RES
- advances in RES technologies in power system
- Electricity market design in the presence of a high share of RES
- Energy community and local electricity market
- Power system digitalization
- smart power grid environment
- power system operation and design, and stability
- Case studies on recent advances in smart grid and integration of RES

Guest Editor

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