

## Special Issue

# Advances in Stability Control, Optimal Operation and Modeling Analysis of Power System with High-Level Renewable Energy

### Message from the Guest Editors

The development of renewable energy resources (RES) has become an obvious choice as the world is obligated to support green energy and achieve carbon neutrality. In this context, a high proportion of RES with large capacity access has gradually become a typical feature of new power systems. This Special Issue aims to provide a forum for all scholars to present their discoveries on technological developments in renewable energy and sustainability. Research areas may include (but are not limited to) the following: 1. Modeling and control of solar, wind, energy storage and emerging generation;

2. Modeling and analysis of renewable energy delivery system;
3. Flexible networking technology of RES;
4. Sensing technology of voltage spatial-temporal distribution;
5. Virtual inertia and primary frequency modulation control;
6. Inertia identification and evaluation analysis;
7. Volt/var optimal control of active distribution network based on RES;
8. Voltage regulation and power compensation strategy;
9. Inertia optimal configuration power system with high-level RES;
10. Virtual synchronous generator;
11. Energy management and tidal current control.

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### Guest Editors

Dr. Bo Zhang

Dr. Jiaoxin Jia

Dr. Sen Cui

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### Deadline for manuscript submissions

30 September 2025



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### Editor-in-Chief

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