

## Call for Papers

### Special Issue on “Grid-forming Technologies and Equipment”

#### Important Dates

**Full Paper Submission: June 30 2025**

**Final Decision Notification: September 30 2025**

**Publication of Special Issue: November 30 2025**

Modern power systems are undergoing a significant transformation with the large-scale integration of renewable energy and power electronic devices. Grid-forming (GFM) technologies have emerged as critical enablers to address stability challenges in low-inertia grids, offering dynamic voltage/frequency support and enhanced system resilience. Globally, there is extensive R&D on GFM equipment such as GFM wind turbines, PV systems, energy storage systems, SVGs, and HVDC systems. Thanks to these efforts, GFM technologies are maturing and transitioning from theory to practical applications.

However, GFM technologies still face many challenges. These include the arduous task of coordinating GFM control with diverse sources (e.g., wind turbines, solar photovoltaic panels, energy storage systems, and capacitors), which exhibit distinct physical characteristics and operate across multiple time scales, thereby impeding system stability. Additionally, the support capabilities of GFM equipment are constrained by the overcurrent capacity of power semiconductor devices and the limitations of energy storage. The insufficient overcurrent capacity and limited energy storage capacity hinder adequate support during power system disturbances or faults.

This special issue aims to bring together researchers and engineers from academia and industry to discuss recent advancements in GFM technologies and equipment. Topics include, but are not limited to:

- Stability analysis of power grids integrated with diverse GFM devices
- Optimal allocation of GFM devices in power grids
- Advanced GFM control strategies and their applications
- Over-current limiting method and fault ride through strategies for GFM converters
- Overload capacity enhancement technologies and topology optimization of GFM equipment
- Modelling and simulation of GFM systems
- Testing methods and performance evaluation of GFM technologies

#### Guest Editors-in-Chief:



**Prof. Zhiyuan He**

**China Electric Power  
Research Institute**

**China**



**Prof. Xiongfei Wang**

**KTH Royal Institute of  
Technology, Sweden**

**Aalborg University,  
Denmark**



**Prof. Xing Zhang**

**Hefei University of  
Technology**

**China**

Submit your paper to CSEE JPES through: <https://mc03.manuscriptcentral.com/cjpes>

The CSEE JEPS website is located at: <http://jpes.csee.org.cn/>.

All papers of CSEE JPES are published on IEEE Xplore Digital Library as Open Access (OA).