



Call for Papers

CMP Chinese Journal of Electrical Engineering

Special Issue on Active Control and Protection of Future Renewables-dominated Distribution Grid

Scheduled Publication Time: May 2022

The green electricity is one of the effective ways to reduce carbon emission. Hence, the replacement of conventional fossil fuel-based thermal plants and the development of renewables-dominated grids have been undergoing in current world. The stable operation of renewables-dominated grids is impacted by the interaction among the physical layer, control layer and agent layer (linked by communication system). For the physical layer, the power electronics converters have been widely used as interfaced devices and multi-functional soft connection devices in the “sources”-“network”-“load”-“storage” of the renewables dominated grids. Moreover, the operation modes of the electricity grid will be modernized from the ac network to hybrid and meshed ac and dc networks, and the network architecture can also be reconfigured dynamically. In this context, the renewables-dominated electricity grids will show more complicate characteristics e.g., the dynamic and steady state performances will be changed, the bidirectional, time-variant and wide frequency spectrum characteristics of power flow become prominent, the high penetration of power electronics requires advanced communication technology. Thus it is necessary to deeply study the active control and protection of the renewables-dominated distribution grid. The objective of this special issue is to focus on the latest developments of active control and protection of the renewables-dominated grid, while promoting academic and industrial interaction and cooperation. Topics of interest include, but are not limited to

- Modelling simplification and order reduction of grid-scale power converters
- Interaction principle, optimal and coordinated control of grid-scale power converters
- Dynamic characteristics of the power converters in renewables-dominated distribution grids
- Power quality issues of the renewable dominated grid and mitigation strategies
- Principles of transient and stable operation and advanced control strategies of renewables-dominated grids
- Modelling and fast simulation technology for the renewables-dominated grids
- Micro-grids and cluster of micro-grids formation and advanced control
- Stability issues of power converters/renewables-dominated grids and the stabilized control methods
- Advanced storage technologies and optimal control strategies
- Protection and control of power converters and renewables-dominated grids under grid faults

All manuscripts must be submitted through Manuscript Central at <https://mc03.manuscriptcentral.com/cjee>. Submissions must be clearly marked “**For Special Issue on Active Control and Protection of Future Renewables-dominated Distribution Grid**” on the cover page. When uploading your paper, please select your manuscript type “Special Issue.” The information about manuscript preparation and requirements is provided on <http://www.cjeeccmp.com/EN/column/column334.shtml>. Manuscripts submitted for the special issue will be reviewed separately and will be handled by the guest editorial board noted below.

Deadline for Submission of Manuscript: January 31, 2022

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Proposed Timeline:

- January 31, 2022 – Manuscripts Submission Deadline
- April 30, 2022 – Manuscripts Forwarded to CJEE for Publication
- March 31, 2022 – Final Acceptance Notification
- May 31, 2022 – Special Issue Appears in CJEE