Special Issue

Frontiers in Resilient Smart Grid System: Microgrid and Distributed Network

Message from the Guest Editors

There is an increasing occurrence frequency of extreme events, which could bring tremendous threats to power distribution systems. Presently, it is a fundamental and urgent requirement for the distribution networks to be resilient. Microgrids demonstrate great potential for improving grid resiliency and sustainability. In the case of extreme events, a microgrid can operate as a self-adequate islanding system to preserve critical loads and support the service restoration. Moreover, a group of microgrids can be adaptively interconnected or partitioned through a dynamic feeder reconfiguration, which would effectively improve the load survivability. Therefore, it is important to discuss and fully exploit the advantages of microgrids for building a resilient smart grid under a carbon-neutral and sustainable perspective. This Special Issue seeks original thoughts and novel approaches that leverage the intrinsic flexibility, self-generation and quick response capability of microgrids to enhance the grid resiliency on power distribution level. Contributions are expected to address the energy safety and disaster management challenges for future smart grid development.

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Editor-in-Chief

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