



Power Electronics in Smart Grids

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Message from the Guest Editors

Dear Colleagues,

Recent events such as the war in Ukraine and natural disasters demonstrate the importance of two aspects in determining energy security: the independence of the energy source and its resilience. This means that we must ensure that local energy sources are available, preferably of renewable energy. Another requirement is the reliability and continuation of service at country level, even if when consumers are cut from the main grid. This implies the use of microgrid with local micro power plants and the use of plug and play connection systems between microgrids and with the main grid. Operation must be independent from the TSO, even if this means switching to a degraded mode in the case of demand/generation power mismatch.

Power electronics are the keystone of these smart grids. They allow interconnection and power transfer between smart grids. This includes grid forming/forwarding, voltage stepping (LV/MV), AC/DC conversions, optimal power point tracking, and power factor control.

This Special Issue address these topics, and authors are encouraged to submit their recent work on the described subjects.





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Message from the Editor-in-Chief

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