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Charging/Discharging Electric Vehicles via Microgrids including Vehicle-to-Grid Technology

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Message from the Guest Editors

The use of microgrids allows more flexible charging/discharging of electric vehicles (EVs), and using vehicle-to-grid (V2G) gives EVs a new role. V2G refers to the power provider company or aggregator to control and manage the electric vehicle (EV) load through the communication between the EV and the power public grid. EVs with V2G function can provide energy back to the public power grid. Electricity companies will be willing to purchase electricity from clients during periods of peak power consumption or use the capacity of electric vehicles' batteries to assist the public grid. Recently, the popularity of EVs has brought about a revolutionary change to the power public grid. EVs can be viewed as distributed energy storage, because EVs can charge and discharge into the public power grid using V2G technology (this technology also maximizes the integration of renewable energy sources). The main advantages of V2G include ancillary services, active power support, reactive power compensation and renewable energy resource support.

This Special Issue will focus on charging/discharging electric vehicles via microgrids, including vehicle-to-grid technology.



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Special Issue



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Message from the Editor-in-Chief

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