Special Issue

Battery Energy Storage in Smart Grid

Message from the Guest Editors

Today, Battery Energy Storage Systems (BESSs) are gaining importance in all sectors of power system. They can be used for providing many services at generation level, such as energy arbitrage, contingency service, area control and frequency regulation, and at transmission and distribution levels, for supporting voltage regulation and providing synthetic inertia and oscillation damping. Moreover, BESSs can support the renewable integration since they can allow time shifting, grid frequency regulation services and fluctuation suppression.

It is therefore clear that BESSs will play a crucial role in the development of smart grids. With this Special Issue, we are looking for works that proposes and eventually validate, via real-time/real field experiments or co-simulation/hardware-in-the-loop simulations, strategy of management and control of BESSs providing efficient and multi-functional services to the grid, considering all possible future and current scenarios.

Guest Editors

Dr. Francesco Conte

Department of Electrical, Electronics and Telecommunication Engineering and Naval Architecture, University of Genoa, 16145 Genova, Italy

Prof. Stefano Massucco

Polytechnic School, Department of Electrical, Electronic, Telecommunication Engineering and Naval Architecture (DITEN), University of Genova, 16145 Genova, Italy

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Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

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