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Bidirectional Energy Transfer Technologies for Vehicle-to-Grid and Other Vehicle-to-X Applications, and Solutions to Issues Caused by High Electric Vehicle Penetration Rates

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Message from the Guest Editors

The penetration rate of electric vehicles (EVs) into the transport sector of future societies will be high. This will result some excellent outcomes, but will also bring one of the greatest challenges to the electric power industry that it has ever faced. Multiple solutions must be developed to address a range of issues at various levels. One potential solution of high promise is vehicle-to-grid (V2G) technology.

We propose a Special Issue on leading edge power electronic and power system issues related to high EV penetration rates, as well as the bi-directional transfer of energy between EVs and other systems (this encompasses not only V2G but all V2X system types). We welcome and encourage submissions in this area. Topics of interest include but are not limited to the following:

- Power electronic V2G, and other V2X, interface technology challenges and solutions;
- V2G, and other V2X, electricity network planning and integration requirements;
- Charge/discharge scheduling and optimization, and issues related to high EV penetration rates;
- Energy-related opportunities and challenges V2G and other V2X will present to EV owners, property owners, and utilities.

Special Issue



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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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