Special Issue

Transaction-Based Peer-to-Peer Energy Management Systems

Message from the Guest Editors

Power systems are undergoing a fundamental transition due to the rapid adoption of distributed energy resources, including photovoltaic generation, electric vehicles, home batteries, and heat pumps. Recently, there has been significant interest in the potential for new transaction-based peer-to-peer energy management systems to integrate prosumer flexibility into power system operations. The aim of this Special Issue is to present state-of-the art research, solutions, and analysis in the field of transaction-based peer-to-peer energy management systems. Topics of interest include, but are not limited to:

- Communication architectures
- Computational complexity and scalability
- Coordination between energy trading platforms
- Data privacy and security
- Electricity market regulations
- Energy access and distributional issues
- Energy reliability
- Game-theoretic analysis
- Market mechanism design
- Microgrid trading platforms
- Modelling distributed energy resource flexibility
- Modelling prosumer preferences and behaviours
- Network costs and externalities
- New business models
- New energy and/or flexibility products
- Pilot programs and field tests
- Uncertainty and network constraints

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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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