



Game Theoretic Strategies for Efficient Energy Management of Home-Microgrids

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Message from the Guest Editor

This Special Issue focuses on proposing an efficient energy management system in the form of incentive demand-side-management (DSM) and demand response schemes. Moreover, due to the presence of rational and smart agents (H-MGs' owners), the game-theoretic approaches including cooperative and non-cooperative can be applied as a promising solution. In fact, game theory applications would overcome existing challenges. It offers dynamically the best strategy to each agent such as the best time of purchasing and selling energy shortage and surplus, respectively. All in all, an efficient energy management system leads to reaching an overall equilibrium point (the most profitable situation for each H-MGs).

The main objectives of the research are:

- An efficient energy management system according to day ahead and long-term scheduling to maximize the use of renewable resources and minimize the H-MGs costs.
- Introducing the incentive mechanisms in order to maximize the participation of H-MGs in demand response schemes.
- Reaching the collective utilities for stakeholders (H-MGs, network operator, retailers, and etc.), and thereby achieving the overall network equilibrium.





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