Guan Xiaohong Microgrid

Abstract--Hydrogen-electrical microgrids are increasingly as-suming an important role on the pathway toward decarboniza-tion of energy and transportation systems.

A Simulation-Based Primal-Dual Approach for Constrained V2G Scheduling in a Microgrid of Building Qilong Huang, Li Yang, Qing-Shan Jia, Yaowen Qi, Cangqi Zhou, Xiaohong Guan. tase, 20 (3):1851 ...

Integrated Hydrogen-Electrical (IHE) microgrids are desirable testbeds for the practice of carbon-neutral energy supply. This paper studies the IHE microgrids planning (IHEMP) under a dynamic...

Numerical studies on a real-world rural energy system in Southwestern China validates the effectiveness of the proposed planning method. It has significantly reduced the levelized system costs through ...

Explicit modeling of multi-energy complementarity mechanism for uncertainty mitigation: A multi-stage robust optimization approach for energy management of hydrogen-based microgrids

Professor Guan is a member of the Chinese Academy of Sciences and is an IEEE Fellow. He has been serving as the Editor of IEEE Transactions on Smart Grid since 2014.

This paper presents a resilience-oriented operation model for industrial parks energized by integrated hydrogen-electricity-heat microgrids, which aims to improve the load survivability under ...

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Yuhang Zhu, Xiaoliang Lv, Qing-Shan Jia, Xiaohong Guan: A deep-ensemble Bayesian optimization with computation budget allocation for design space exploration problems.CASE2025: 2594-2599

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