

Title: Grid reinforcement micro-meteorology

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This paper aims to provide readers with insights into the effects of micro-meteorology on power systems, as well as the actual improvement brought by micro-meteorology in some power ...

Building on this, we proposed a cooperative multi-agent deep reinforcement learning (MADRL)-based EMS framework to provide flexible scalability for microgrids, enhance resilience and reduce ...

Well-designed energy management systems (EMS) have made progress in improving microgrid resilience through the coordination of distributed energy resources (DERs), but still face ...

Two case studies on a 33-bus microgrid with integrated renewable energy sources demonstrate the framework's effectiveness under normal and HILF conditions. The uncertainties in ...

This paper investigates the performance of a grid-connected inverter in a hybrid microgrid and compares different controllers, including Artificial Neural Network (ANN), Adaptive Neuro-Fuzzy ...

To mitigate these challenges, this study introduces a resilience enhancement framework for distribution systems based on robust safe reinforcement learning (RSRL), which exploits the ...

Techniques such as deep reinforcement learning and imitation-based control have demonstrated potential for enabling real-time, adaptive decision-making tailored to rapidly evolving microgrid ...

Therefore, this study proposes a method for micro-meteorological analysis and prediction of power grid environments based on micro sensors, aiming to provide strong support for the safe ...

This paper proposes a new parallelized reinforcement learning (PRL) method based on the probabilistic events to handle the microgrid energy uncertainties.

While renewable energy sources provide significant advantages, solar power heavily depends on weather



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conditions, which makes it changeable and sometimes unreliable. ...

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