

To address these challenges, this paper proposes a two-stage robust microgrid dispatch model with real-time energy sharing and endogenous uncertainty. In the day-ahead stage, the ...

To enhance the reliability of distributed power generation and facilitate its efficient integration with the power grid, microgrid technology has been identified as an effective solution that has garnered ...

Power dispatch in microgrids refers to the process of managing and distributing power generated by DERs within a microgrid. This can be a challenging task due to factors such as the ...

Dutch cyclists rode down the world's first bike path made entirely of discarded plastic this week, in a move aimed at reducing the millions of tonnes wasted every year.

Tennessee's Chattanooga Metropolitan Airport recently became the first U.S. airport powered by 100 percent solar energy. Started in 2010, the \$10 million microgrid project ...

Local communities generating their own power could become 90% energy self-sufficient, with potential to be fully self-reliant in the future, according to a Dutch study.

To address these challenges, the microgrid will include a rapid solid-state switch to protect the microgrid from grid disturbances. NLR collaborated with Caterpillar to test a prototype utility-scale ...

Renewables-based microgrids and peer-to-peer (P2P) energy trading can boost energy security as they are self-sufficient and run independent of large grids.

Results show that the microgrid consistently satisfies load demand with minimal reliance on costly external grid power. Renewable energy sources are maximized for cost reduction, while ...

Pacific small island states, contributing only 0.03% of global emissions, are leading with ambitious renewable energy projects and net-zero goals by 2050.

This work developed a simulation environment and tertiary controls approach for microgrid economic dispatch and resilience dispatch for grid-connected and islanded operations, respectively.

Amid an electricity crisis, many Nigerian small businesses run on petrol generators. This solar-microgrid start-up is working to connect them to clean energy.

Our innovative approaches in forecasting and dispatch, coupled with addressing existing research gaps,

provide a comprehensive framework that empowers microgrid operators to optimize ...

This model focuses on optimally managing the charging and discharging of the EVs' onboard energy storage, referred to as the ESS, as well as power dispatch of the grid and renewable ...

Battery energy storage systems can address the challenge of intermittent renewable energy. But innovative financial models are needed to encourage deployment.

The need for energy security, along with reliable, affordable, low-carbon power, has never been greater. AI is helping to meet rising demand and support this goal.

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