

How to make 5G base stations self-sufficient in electricity

To further develop energy modelling methodology and attempt to answer the questions presented in the previous section, different machine learning algorithm's ability to predict energy consumption is ...

To enhance the utilization of base station energy storage (BSES), this paper proposes a co-regulation method for distribution network (DN) voltage control, enabling BSES participation in ...

To address this, we propose a novel deep learning model for 5G base station energy consumption estimation based on a real-world dataset. Unlike existing methods, our approach integrates the Base ...

In response to the energy-saving needs of 5G base stations, this article combines IoT technology, artificial intelligence technology, and thermal design technology to conduct research on energy ...

Execution Strategy: The integrated energy-saving strategy is sent to the network management system to perform the energy-saving operations on 5G base station, such as deep sleep, carrier shutdown, ...

Aiming at minimizing the base station (BS) energy consumption under low and medium load scenarios, the 3GPP recently completed a Release 18 study on energy savi

In today's 5G era, the energy efficiency (EE) of cellular base stations is crucial for sustainable communication. Recognizing this, Mobile Network Operators are actively prioritizing EE for both ...

To further explore the energy-saving potential of 5 G base stations, this paper proposes an energy-saving operation model for 5 G base stations that incorporates communication caching and ...

We formulate an optimization problem for the proposed energy saving scheme and obtain the solution using particle swarm optimization (PSO).

These enablers are designed to facilitate dynamic energy-saving techniques for 5G base stations (gNBs). The objective is to reduce gNB energy use by operating the radios more efficiently than ...

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