

Our study introduces a communications and power coordination planning (CPCP) model that encompasses both distributed energy resources and base stations to improve communication quality ...

Our research addresses the critical intersection of communication and power systems in the era of advanced information technologies. We highlight the strategic importance of ...

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 ...

Compared with the fourth generation (4G) technology, the fifth generation (5G) network possesses higher transmission rate, larger system capacity and lower tran

In this paper, we present a power consumption model for 5G AAUs based on artificial neural networks. We demonstrate that this model achieves good estimation performance, and it is able to capture the ...

With the rapid development of 5G base station construction, significant energy storage is installed to ensure stable communication. However, these storage resources often remain idle, ...

The work begins with outlining the main components and energy consumptions of 5G BSs, introducing the configuration and components of base station microgrids (BSMGs), as well as ...

5G wireless devices communicate via radio waves sent to and received from cellular base stations (also called nodes) using fixed antennas. These devices communicate across specific frequencies ...

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