

The proposed BS coordination strategy can be widely applied in practice, especially for the energy-constraint and backhaul-limited networks, to enhance the coverage and service quality for MUs, in a ...

In this work, we analyze the energy and cost savings for a defined energy management strategy of a RE hybrid system. Our study of the relationship between cost savings and percentage of sites equipped ...

This paper develops a method to consider the multi-objective cooperative optimization operation of 5G communication base stations and Active Distribution Network (ADN) and constructs a description ...

In this work, we investigate the feasibilities and challenges of energy-communication-transportation hub (ECT-Hub) design from a base-station-centric view and propose methods to tackle the challenges ...

In this paper, a distributed collaborative optimization approach is proposed for power distribution and communication networks with 5G base stations. Firstly, the model of 5G base ...

The analysis results demonstrate that the proposed model can effectively reduce the power consumption of base stations while mitigating the fluctuation of the power grid load.

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

The base station's average energy consumption during a certain time period has been estimated. A range of optimization approaches, namely PSO, ABC, and GA, have been employed to ...

Wireless networks have important energy needs. Many benefits are expected when the base stations, the fundamental part of this energy consumption, are equipped.

In this paper, hybrid energy utilization was studied for the base station in a 5G network. To minimize AC power usage from the hybrid energy system and minimize solar energy waste, a ...

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