



**EQACC SOLAR**

**Long distance communication  
reduces base stations**



## Overview

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Will communication base stations reduce electricity consumption?

Our findings revealed that the nationwide electricity consumption would reduce to 54,101.60 GWh due to the operation of communication base stations (95% CI: 53,492.10–54,725.35 GWh) (Figure 2 C), marking a reduction of 35.23% compared with the original consumption. We also predicted the reduction of pollutant emissions after the upgrade.

Can low-carbon communication base stations improve local energy use?

Therefore, low-carbon upgrades to communication base stations can effectively improve the economics of local energy use while reducing local environmental pollution and gaining public health benefits. For this research, we recommend further in-depth exploration in three areas for the future.

How effective are communication base stations in reducing air pollution?

In Figure 5 A, after implementing optimization measures to communication base stations, the cases of COPDs related to air pollution caused by communication base stations in 2021 would be reduced to 13,004 (65% reduction). The effectiveness of these optimizations becomes more pronounced in the following year.

How much energy does a communication base station use a day?

A small-scale communication base station communication antenna with an average power of 2 kW can consume up to 48 kWh per day. 4,5,6 Therefore, the low-carbon upgrade of communication base stations and systems is at the core of the telecommunications industry's energy use issues.

## Long distance communication reduces base stations

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### High-speed FSO-5G wireless communication system with ...

This bidirectional FSO-5G wireless communication system offers a high-speed and cost-effective solution for extending 5G coverage in both densely and sparsely populated areas.

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## LBA 3 Communication Micro BaseStation

The LBA3 private network micro-base station system is a high-performance long-distance and large-bandwidth link system solution independently developed by Leixun Innovation consists

...



**2MW / 5MWh**  
Customizable

### Energy-efficiency schemes for base stations in 5G ...

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 ...

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## Optimizing redeployment of

## communication base station

Most of the current research is based on the performance of the base station (BS) itself or the operation mode of the communication operator without considering the users' ...



## Optimization Control Strategy for Base Stations Based on Communication

On the basis of ensuring smooth user communication and normal operation of base stations, it realizes orderly regulation of energy storage for large-scale base stations, ...

## Low-carbon upgrading to China's communications base stations ...

As China rapidly expands its digital infrastructure, the energy consumed by communication base stations has grown dramatically. Traditionally powered by coal ...



## Integrated Sensing and Communication enabled ...

Driven by the intelligent applications of sixth-generation (6G) mobile communication systems such as smart



city and au-tonomous driving, which connect the ...

## Multi-objective cooperative optimization of communication base

...

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



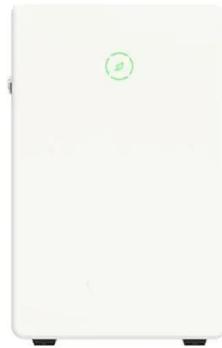
## Optimal energy-saving operation strategy of 5G base station ...

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 ...

## Active-Time Reduction of Base Stations for Energy Reduction ...

Abstract: This paper proposes an active-time-reduction technique of base stations for energy reduction using

terminal position information estimated from wireless ...



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