

NKOSITHANDILEB SOLAR

# Juba Communication 5g base station construction green space



## Overview

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The emergence of fifth-generation (5G) telecommunication would change modern lives, however, 5G network requires a large number of base stations, which may lead to greater carbon emissions. Sin.

Can a 5G base station promote green development of mobile communication facilities?

However, a significant reduction of ca. 42.8% can be achieved by optimizing the power structure and base station layout strategy and reducing equipment power consumption. Overall, this study provides a clear approach to assess the environmental impact of the 5G base station and will promote the green development of mobile communication facilities.

What is the system boundary of 5G base station?

The system boundary of the CO<sub>2</sub> of 5G base station The civil construction of 5G base stations is typically carried out using the existing infrastructure of 4G base stations, resulting in less material input during the construction phase. The primary focus on carbon emission generation is during the use phase due to power consumption.

What is 5G base station equipment architecture?

The 5G base station equipment architecture mainly adopts the BBU + AAU method. The BBU is the baseband part and can be further divided into two logical network elements, CU and DU. The CU handles the protocol stack functions above the PDCP layer of the wireless network, while the DU handles radio protocol functions below the PDCP layer.

How many 5G base stations are built in China?

Emission reduction potential and model sharing In 2019, China began to build 5G base stations and has built over 113,000. Construction of 5G base stations accelerated in 2020 and a total of 718,800 base stations were built, resulting in a sharp increase in carbon emissions.

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In order to increase the contribution of the communication industry to mitigate the global greenhouse effect, future efforts must focus on reducing the carbon emissions ...

In Shenzhen, China Mobile's 5G-A and Red Cap technology is improving skyscraper management, saving over 47% in energy per building and creating safer, more ...

This is not only a system that couples DPV-5G BS-ES with each other through communication and electricity, but also a guiding solution for the optimal siting and ...

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The Ministry of Industry and Information Technology issued the " Action Plan for Green and Low-Carbon Development of the Information and Communication Industry ( 2022 ...

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The construction of 5G internet of vehicles private networks will be promoted in key areas such as the Lin-gang Special Area, Jinqiao of Pudong New Area and the demonstration ...

Therefore, for the 5G base station carbon reduction path, participating in the common construction and sharing of communication infrastructure to reduce the base station ...

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