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# Construction of green base stations for maritime communications

Are green cellular base stations sustainable?

This study presents an overview of sustainable and green cellular base stations (BSs), which account for most of the energy consumed in cellular networks. We review the architecture of the BS and the power consumption model, and then summarize the trends in green cellular network research over the past decade.

Should China upgrade to low-carbon base stations?

These outcomes demonstrate that upgrading to low-carbon base stations not only ensures economic feasibility but also delivers significant environmental and public health benefits, reinforcing the strategic value of decarbonizing China's communication infrastructure.

How many 5G base stations are built in China?

As 5G serves as the foundation for the construction of new infrastructure, China, as the world leader in 5G base station construction, has already built over 1.4 million 5G base stations in 2021 alone. In the same year, 5G base stations in China produced approximately 49.2 million tons of CO<sub>2</sub> eq.

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.

Energy efficiency and renewable energy are the main pillars of sustainability and environmental compatibility. This study presents an overview of sustainable and green cellular ...

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 associated with ...

We will strive to build new international maritime optical cables and landing stations, build green data centers that serve international data cooperation, and create a new ...

Therefore, this chapter aims to provide an overview of green 5G base stations, exploring their construction in China, their environmental impact, and the various factors and ...

Find out how China Mobile's TM Forum Excellence award-winning green 5G network is improving safety for workers in marine industries, reducing carbon emissions, and ...

Shanghai is accelerating the construction of a global dual-ten-gigabit city marked by 5G-A and ten-gigabit optical networks. The "5G Sea Access" and "Broadband Maritime Frontier" ...

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