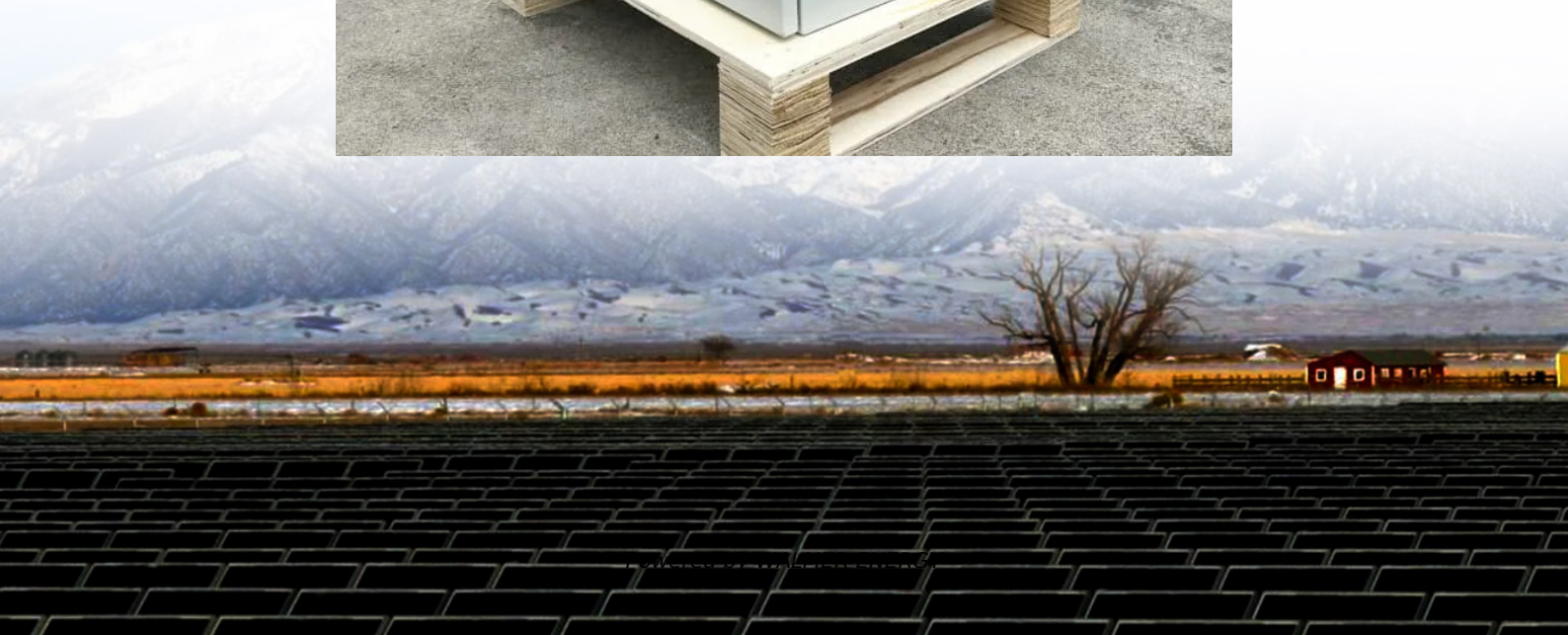


Does the scheduled sleep mode of a 5G base station consume electricity





Overview

The explosive growth of mobile data traffic has resulted in a significant increase in the energy consumption of 5G base stations (BSs). However, the existing energy conservation technologies, such as tradi

Can base stations save energy in 5G cellular networks?

Base stations (BSs) sleeping strategy has been widely analyzed nowadays to save energy in 5G cellular networks. 5G cellular networks are meant to deliver a higher data speed rate, ultra-low latency, more reliability, massive network capacity, more availability, and a more uniform user experience.

Do base station sleep modes reduce energy consumption?

Therefore, base station sleep modes are introduced to reduce the energy consumption of mobile networks by deactivating unnecessary radio resources during periods of low data traffic. However, the energy reduction that can be obtained by sleep modes comes at a performance cost.

Is a 5G BS a sleeping retrial queue?

For energy efficiency in 5G cellular networks, researchers have been studying at the sleeping strategy of base stations. In this regard, this study models a 5G BS as an $(M^{\{X\}}/G/1)$ feedback retrial queue with a sleeping strategy to reduce average power consumption and conserve power in 5G mobile networks.

What is advanced sleep mode (ASM) in 5G?

The introduction of advanced sleep modes (ASM) is one of the main features of 5G networks that enables energy reduction at the base station (BS) level. While more base stations are deployed to cope with increasing data rates, not all base stations are needed at all times.



Does the scheduled sleep mode of a 5G base station consume elect

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