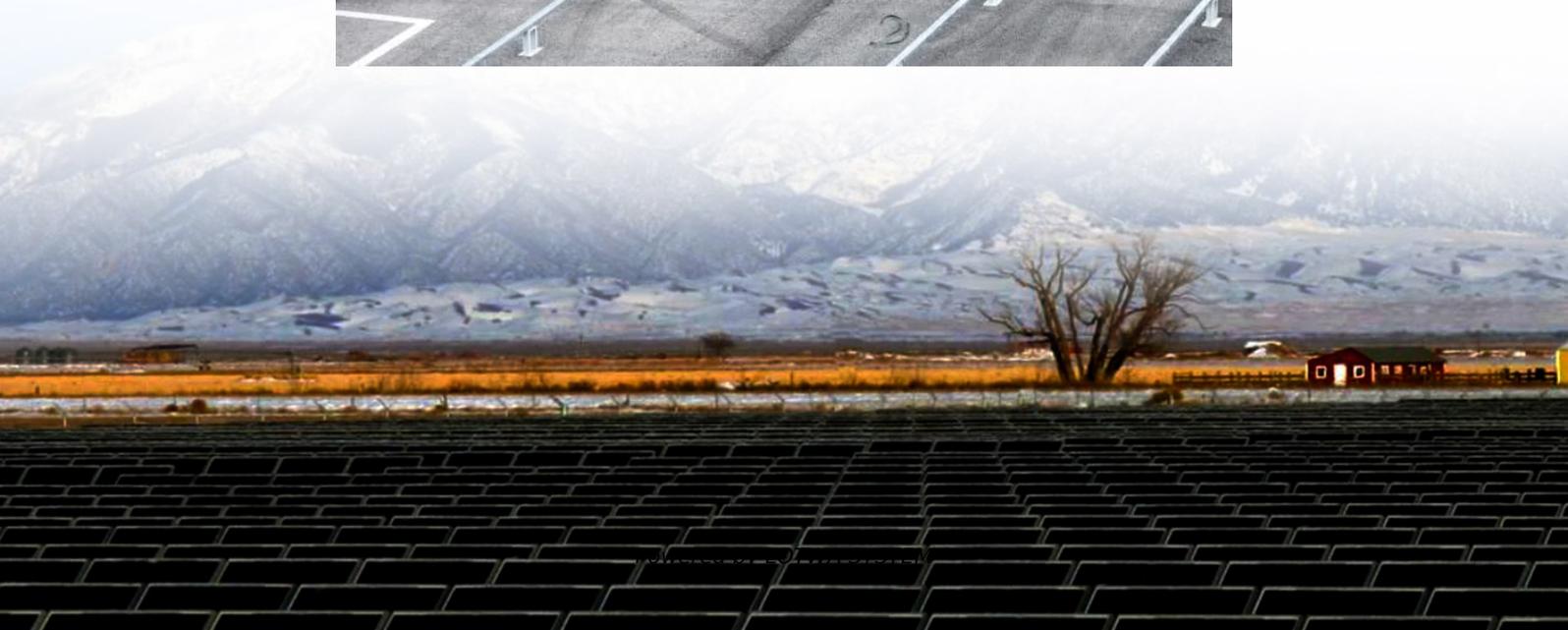
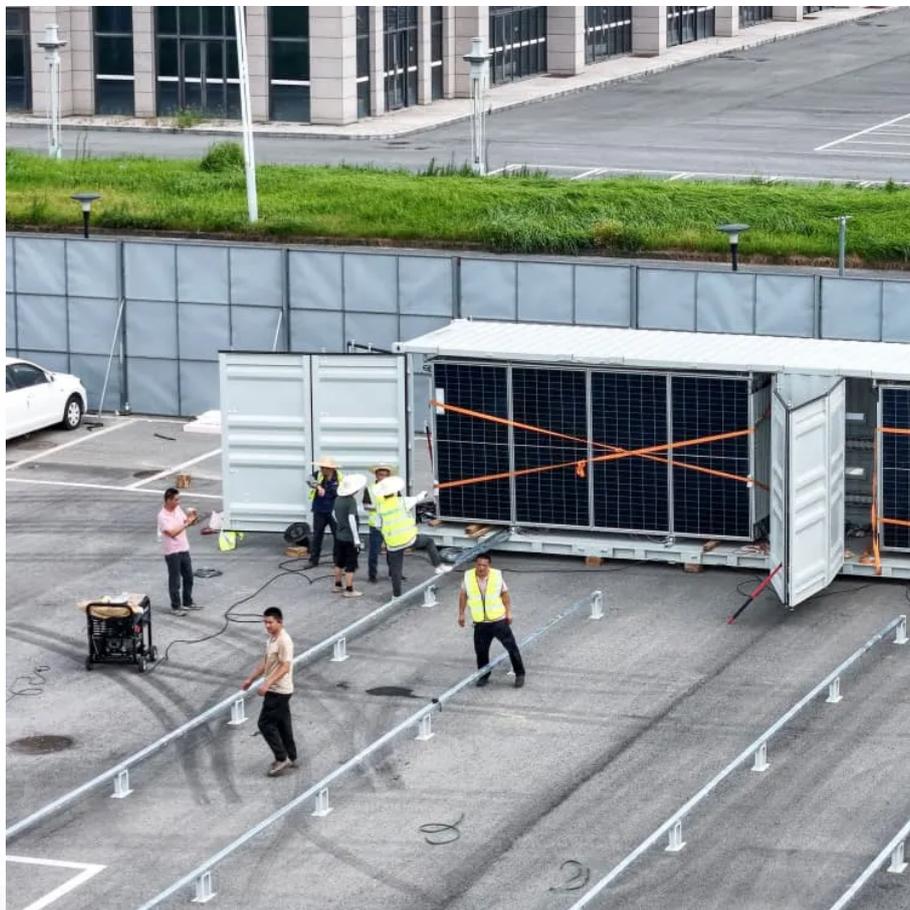


Will shutting down 5G base stations cost electricity





Overview

Does 5G reduce energy consumption?

The 5G specification of 3GPP requires that energy consumption be reduced by 90% (3GPP, 2020). Although the use of natural gas has been reduced in the past decade, carbon emissions are still mainly from gas-fired power generation (see Fig. 22).

Does 5G configuration affect base station capacity?

In this study, we mainly focused on the commercial 5G non-standalone networks, 2 and the configurations (transmit and receive antennas, spectrum frequency and bandwidth) defined in this part has a decisive impact on base station capacity (see Eq.1).

How will 5G impact MNOs?

Nevertheless, the overall energy usage by 5G base stations needs to be reduced as it will account for approximately 2%–3% of total UK's energy consumption in 2030. Energy costs account for 19% - 23% of RAN OpEx, which will seriously affect MNOs' mainstream profits.

Why is 5G so expensive?

Such energy consumption cannot be tolerated because it will cause corresponding environmental and economic problems. The construction of a new generation of wireless cellular networks is also costly, that often exceed billions of pounds. The technical complexity of 5G makes its implementation cost even higher.



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In addition to timing switches, 5G base stations can also save

Recently, a news about China Unicom shutting down 5G base stations from 21:00 to 9:00 the next day to reduce energy consumption and save electricity bills has attracted a lot of attention. ...

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5G base station saves energy and reduces consumption

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China Unicom responds to the unsustainable electricity bills of 5G base

The Definition of Electronic Ballast Recently, in response to the statement that "the electricity bills of 5G base stations cannot be sustained, and they are shut down at night just to save power," ...

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