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Title: Outdoor base station emits 7MWh

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How can base stations be improved?

Currently, limited research (Tala't et al., 2017) is focused on improving the power supply mode of base stations, such as replacing traditional thermal power generation with renewable energy (photovoltaic systems, wind power) and equipping micro base stations with solar cells.

How much carbon does a micro/macro base station emit?

The results indicated that the carbon emissions of one micro/macro base station were 6.2 &#177; 0.4 and 30.2 &#177; 1.5 tons, respectively, subject to one-year operation time. At national level, the total carbon emissions were 17&#177;5 million metric tons (Mt) in 2020, and may increase to 145&#177;7 Mt by 2030.

Can remote base stations be given power supply?

More specifically, some remote base stations without the scope of the power grid can be given power supply while greatly reducing the carbon emissions and construction costs of the base station (Hassan et al., 2013).

What equipment does a micro base station use?

The AAU of the micro base station adopts the Remote Radio Unit (RRU) and antennas (Simic, 2007). Equipment parameters vary by manufacturers (Yu et al., 2021). Data from four manufacturers (see Table S2) were collected to measure their uncertainty through Monte Carlo simulation.

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