Safe distance between communication base stations and wind power

Overview

Reasonable distance between communication towers and wind turbine towers is a function of two things: (1) the physical turning radius of the wind turbine blades and (2) the characteristics of the communication systems on the communication tower. In planning the wind energy turbine locations, a conservative approach would dictate not locating any turbines in close proximity to existing tower structures to avoid any possible impact to the communications services provided by the structures. In many cases the distances needed will be less than is shown here — but in a few cases, a greater distance will be required. Therefore, it is always best. (1) Base stations with an emission bandwidth of 1 MHz or less are limited to 1640 watts equivalent isotropically radiated power (EIRP) with an antenna height up to 300 meters HAAT, except as described in paragraph (b) below. Depending on the aerodynamic efficiency of the antenna, the increased wind load can be significant.

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Communication base station wind power distance requirements

We investigate the use of wind turbine-mounted base stations (WTBSs) as a cost-effective solution for regions with high wind energy potential, since it could replace or even outperform

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Appendix Q - Communication Tower Study

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Safety issues in wind power construction at communication base stations

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.

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Human Exposure to Radio

Frequency Fields: Guidelines for Cellular

Measurements made near typical cellular and PCS cell sites have shown that ground-level power densities are well below the exposure limits recommended by RF/microwave safety ...

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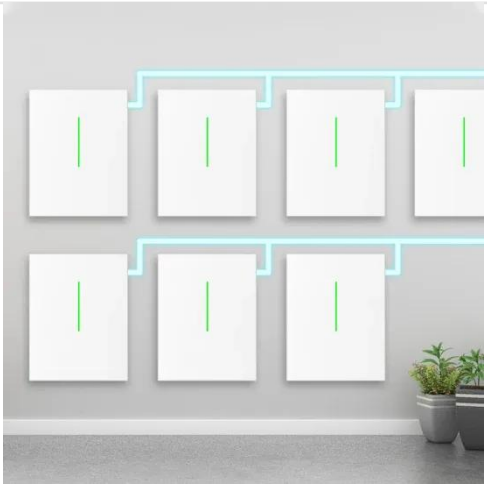

eCFR :: 47 CFR 24.232 -

§ 24.232 Power and antenna height limits. (a) (1) Base stations with an emission bandwidth of 1 MHz or less are limited to 1640 watts equivalent isotropically radiated power (EIRP) with an antenna height ...

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Evaluated minimum safe distances for mobile ...

In Table 1 are presented the minimum safe distances for GSM 900, GSM 1800 and 3G base stations, in terms of public and occupational exposure.

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Wind power safety distance of city communication base station

Wind Power GeoPlanner(TM) Communication Tower Stu Apr 3, The separation distance required based on the characteristics of the communication

systems will vary depending on the type (s) of ...

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Base stations and networks

The intensity of the radio waves is drastically reduced as the distance increases from the base station antenna. On the ground, in houses, and other places where people reside, the exposure levels from ...

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What Distance is Safe?

Based on findings like these, a minimum safety distance of 1/4 mile (1320 feet) might be considered prudent. And again, individuals with EMF hypersensitivity or other serious health issues may want to ...

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