

Principle of solar power generation for mobile base stations





Overview

Are solar powered cellular base stations a viable solution?

Cellular base stations powered by renewable energy sources such as solar power have emerged as one of the promising solutions to these issues. This article presents an overview of the state-of-the-art in the design and deployment of solar powered cellular base stations.

What is a solar-powered base station?

A solar-powered base station as shown in Fig. 5.14 consists of a PV powering unit, a base station and a cooling unit. The base station uses radio signals to connect devices to network as a part of traditional cellular telephone network and solar powering unit is used to power it.

What are some examples of solar-powered base stations?

Below are some examples of the use of solar-powered base stations for disaster-struck and remote areas. In Vermont, United States, a Canadian border town of Norton maintained communications with the outside world by using a solar panel and battery system on a cell tower during flooding from Tropical Storm Irene in 2011.

Are solar-powered cellular base stations the future of telecommunications?

In recent years, the telecommunication sector has shown an increased interest in the adoption of solar-powered cellular base stations due to financial benefits, accessibility to remote areas, and reduction in green gases in the environment.



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