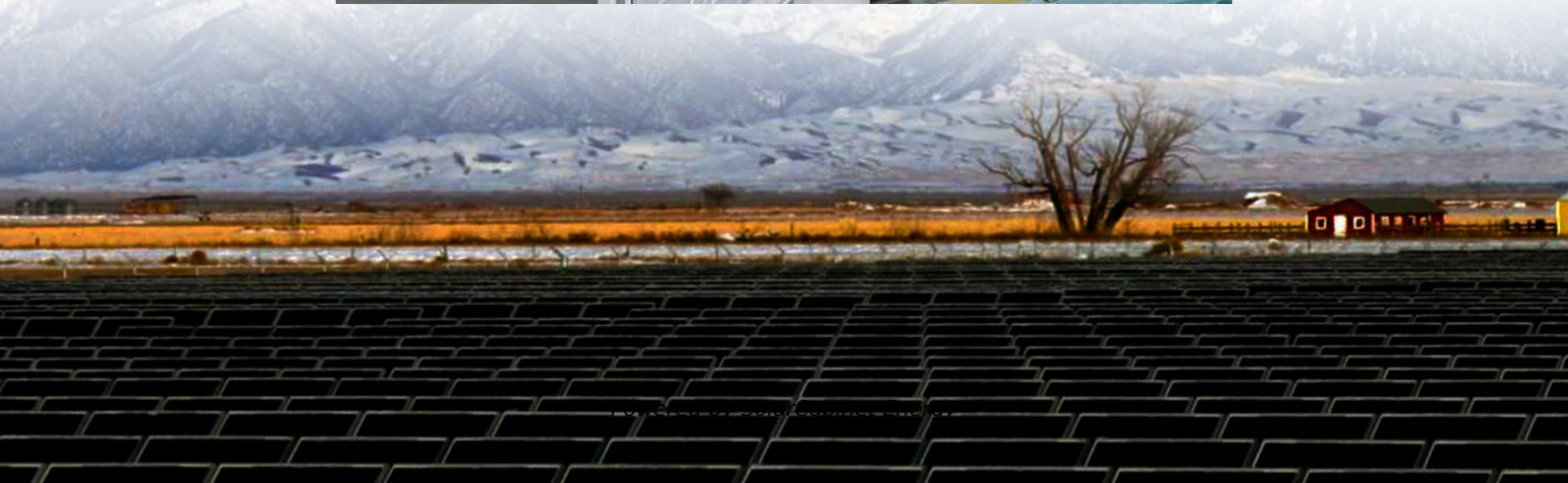


The electricity price of communication base stations is high





Overview

How many types of equipment are in a base station room?

Table 2. Power consumption of four types of equipment in each period. The pricing method of flat electricity price is that the average price of 0.675 yuan/kWh is adopted at any time. The equipment types in the base station room include: transmission equipment (PTN, etc.), communication equipment (BBU, RRU, AAU, etc.), and air conditioner.

Why are electric bills rising?

Rising electric bills are hitting households nationwide as AI data centers, LNG exports, heat waves, and grid costs drive power prices higher.

How many types of base stations are there?

Statistics show that the number of four types of base stations are 20, 24, 11 and 24, with PUE mean values of 1.63, 1.45, 1.47 and 1.57 respectively. There is no obvious difference in PUE of all types of base stations throughout the year.

Why are electricity bills so high in 2025?

That translates directly into higher electricity bills this year. July 2025 saw record-breaking temperatures across much of the country, with a “heat dome” trapping high humidity and driving peak demand to 758,149 MWh in a single hour—a national record.

Why is electricity demand rising faster than utilities can build capacity?

Layer on top of that the electrification push—EVs, heat pumps, electric appliances—and electricity demand is rising faster than utilities can build capacity. The mismatch creates structural upward pressure on rates, regardless of short-term market moves.

How much energy does a data center use?



These facilities are energy-intensive, often consuming 30 times more electricity than traditional data centers. A single AI center can draw as much power as 80,000 homes, and by 2030, data centers are projected to require 30 GW of new capacity—the equivalent of 30 nuclear reactors.



The electricity price of communication base stations is high

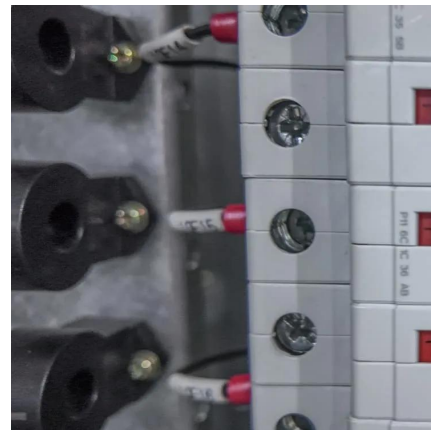


[Experimental Study on Heat Transfer Performance of Separated ...](#)

Communication base stations are facing the problems of uneven heat dissipation and high energy consumption of the heat dissipation systems. The separated heat pipe heat exchanger ...

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We compared the growth rates of electricity consumption for communication base stations during the periods of 2021-2025 and 2025- 2030 (Table S3), finding that the average growth rate of ...



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