NKOSITHANDILEB SOLAR

Data Center Using Baku Photovoltaic Container 10kW

1075KWHH ESS

Overview

In order to develop the green data center driven by solar energy, a solar photovoltaic (PV) system with the combination of compressed air energy storage (CAES) is proposed to provide electricity for the.

How to develop a green data center driven by solar energy?

The system parameters are analyzed. In order to develop the green data center driven by solar energy, a solar photovoltaic (PV) system with the combination of compressed air energy storage (CAES) is proposed to provide electricity for the data center. During the day, the excess energy produced by PV is stored by CAES.

What is the PV power consumption of a data center?

During the period from 8:25 to 17:07, the PV power generation is higher than 17.5 MW. Therefore, during this time, the power consumption of the data center can be fully supplied by the PV system, and the excess PV power is used for the charging process of CAES system to compress the air and store the compressed energy.

How much solar power does a data center need?

Thereafter, system performances under design conditions and the effects of system parameters are analyzed. The results indicate that under design conditions, for the 17.5 MW data center, the required solar PV area is 257075 m2, and the highest PV power can reach up to 55 MW. The all-day efficiency of the PV system is 18.37 %.

Should you invest in solar to power your data centre operations?

The combination of digital growth and sustainability pressures is creating a new era of infrastructure development. If you are investing in solar to power your data centre operations, having the right team in place is critical. Get in touch with our team below to discuss your hiring needs! Hyperscalers are using on-site solar to power data centres.

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