Solar thermal power station policy

Does China need thermal energy storage?

China required from the first demonstration phase that each CSP project must include thermal energy storage, marking the first recognition globally of the value of the low cost and longevity of thermal energy storage. As a power station storing solar energy thermally, CSP operates like a gas plant to supply grid services like rolling reserves.

How to promote solar thermal power generation?

Furthermore,it is essential to refine relevant policies and market mechanisms for solar thermal power generation,providing additional financial incentives and support. Expanding into new markets and regions,fostering international cooperation,and promoting the implementation of solar thermal projects are crucial steps.

Is thermal energy storage (CSP) a promising technology for solar energy utilization?

CSP is a promising technology for solar energy utilizationwith far-reaching implications for China (Yang et al.,2010). However,an efficient and economical thermal energy storage (TES) system is one of the key factors determining the development of this technology (Pelay et al.,2017).

Where are solar thermal power stations located?

Solar thermal power stations under construction or being planned are mainly distributed in Gansu province(Yumen City,Dunhuang city,Aksay Kazakh Autonomous County,Jinta County,and Gulang County),Hami City in the Xinjiang Uygur Autonomous Region,Zhangjiakou city in Hebei province,and Urad Front Banner in the Inner Mongolia Autonomous Region.

On the power supply side, in accordance with the relevant requirements of this plan, the scale, layout, and timing of the construction of regulation capacity for various power sources such as ...

Figure 1 shows new and cumulative installed CSP capacities in China from 2012 to 2019. 3 In terms of distribution characteristics, solar thermal power stations in China are distributed over ...

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As its first trough-type solar thermal power station project with an EPC contract in China, the project is of great significance for POWERCHINA. It can effectively help POWERCHINA explore the ...

Abstract. China has become a global leader in the development of concentrating solar thermal power (CSP), taking advantage of state support, localized supply chains, and integration ...

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In solar thermal power plants, solar radiation is used to generate electricity in what is otherwise a conventional power plant process. Mirrors concentrate the sunlight on a radiation collector and heat ...

Integration of solar thermal energy technologies with thermal energy storage to meet the non-sunshine hours thermal energy demands is also discussed. Additionally, the chapter ...

In light of the growing environmental awareness and the sustainable development consideration in energy policies, the environmental impacts of concentrating solar power (CSP) have ...

To promote the development of renewable energy, China re-implemented the Chinese Certified Emission Reduction (CCER) policy in 2023. This study explores certificated CO 2 and air ...

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