

Solar power generation 3 4 yuan per watt





Overview

To improve the understanding of the cost and benefit of photovoltaic (PV) power generation in China, we analyze the per kWh cost, fossil energy replacement and level of CO₂ mitigation, as well as the cost per u.

How much solar energy can China generate a year?

The total potential for solar radiant energy is 1.7×10^{12} tons of standard coal equivalent per year for the country (Zhang et al., 2009a). China started generating solar photovoltaic (PV) power in the 1960s, and power generation is the dominant form of solar energy (Wang, 2010).

How is solar energy used for power generation in China?

Solar energy is used for power generation in two main ways: photovoltaic (PV) and concentrated solar power (CSP) (Desideri and Campana, 2014). At present, PV technology in China has become mature after decades of development.

Can China achieve a 1300 GW solar power capacity target?

Although we have reached some valuable conclusions, there are still several points need to be improved. As the goal is to explore the minimum cost path for achieving China's cumulative installed solar PV power capacity target of 1300 GW in 2050, the optimal development path may show a stable pattern with little difference in the early stage.

Does China have a large-scale consumption of PV power generation?

In this study, some parameter settings are specific to the Chinese situation. However, our conclusions have policy implications for the large-scale consumption of PV power generation in China and other countries. In 2014, China's PV cumulative installed capacity reached 28.05 GW. Currently, supportive policies in China focus on the national level.



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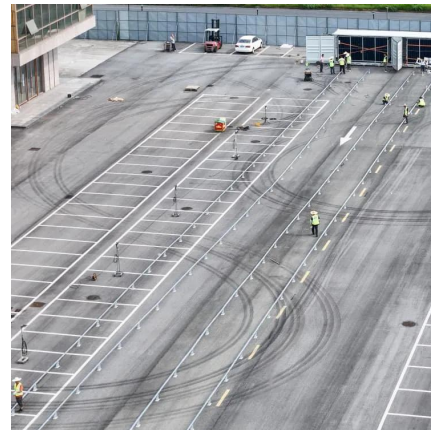


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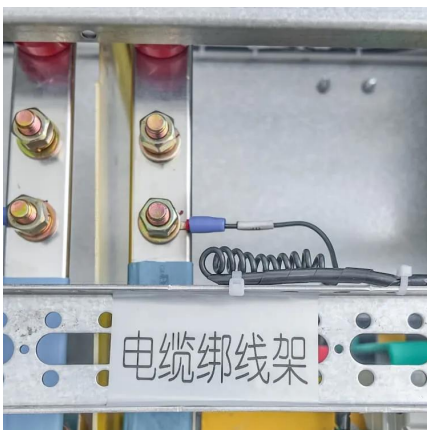
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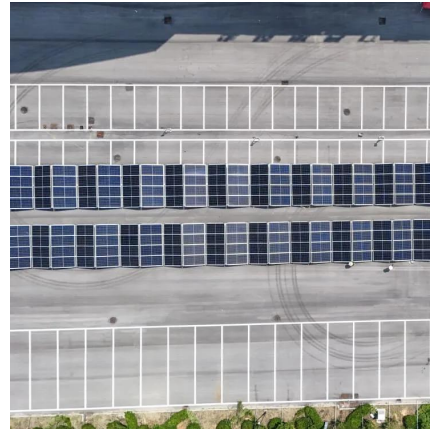
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