

ContainerPower Energy Solutions

Solar panels in rural Germany



Overview

Germany could install up to 500 GW of agrivoltaic capacity on the most suitable agricultural land, far exceeding its PV expansion target for 2040, according to a new study by Fraunhofer ISE. Are solar panels a viable investment in Germany?

Today, the efficiency of solar panels is so much higher, which makes also investments in Germany viable, and without any subsidies," he says. The capacity of the projected solar farms vary, from about 50 MW up to 240 MW, but they are always planned as hybrid power farms, meaning that the solar panels are combined with battery storage.

Does Germany need more arable land for solar energy production?

Due to the competition for agricultural land – a valuable and limited natural resource in Germany – photovoltaics on roofs and integrated into buildings are favoured over ground-mounted photovoltaics (GM-PV) . However, a small percentage of arable land is needed for solar energy production to reach Germany's energy transition target .

Where can agrivoltaics be used in Germany?

Since most permanent crops are located in southern Germany, particularly in the states of Rhineland-Palatinate, Baden-Württemberg, and Bavaria, with an average specific solar energy yield of 1.175 kWh/kWp (ranging between 1.100 and 1.250 kWh/kWp) , these areas are considered well suited for agrivoltaics as shown in Fig. 3. Fig. 3.

Can Germany deploy 500 GW of agrivoltaic power?

Sandra is News Director of pv magazine Deutschland. She has been reporting on solar since 2008. Fraunhofer Institute for Solar Energy Systems (ISE) says Germany could deploy up to 500 GW of agrivoltaic capacity, based on a nationwide assessment of all agricultural land types and site suitability criteria.

What is Germany's spatial agrivoltaics potential?

Germany's spatial agrivoltaics potential on permanent, moderate and full shade-tolerant cropland (left) and soil qualities (right). The spatial analysis of soil quality and the cultivation of permanent, moderate, and full shade-tolerant crops shows variations in the distribution of these crops across soil quality classes.

How much agrivoltaic capacity can Germany install?

From pv magazine Germany Germany could install up to 500 GW of agrivoltaic capacity on the most suitable agricultural land, far exceeding its PV expansion target for 2040, according to a new study by Fraunhofer ISE.

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