# SOLAR PRO.

### Is the UK generating enough solar power

Could Britain's energy needs be met entirely by wind and solar?

Britain's energy needs could be met entirely by wind and solar, according to a policy brief published today by Oxford's Smith School of Enterprise and the Environment. Wind and solar can provide significantly more energy than the highest energy demand forecasts for 2050 and nearly ten times current electricity demand (299 TWh/year).

#### Does the UK get a lot of solar power?

While the sunniest parts of the UK receive much less solar radiation than the sunniest parts of Europe, the country's insolation in the south is comparable with that of central European countries, including Germany, which generates about 10.7% of its electricity from solar power.

#### What percentage of UK energy is renewable?

In the United Kingdom, the total renewables share of energy generation in 2018 was 33%, which accounts for an increase of 3.8% compared to the previous year. The biggest share went with onshore and offshore wind power, which combined comprise 17.1%. On the second place was bioenergy with 10.4% and third, solar energy with 3.9%.

#### How has the UK benefited from solar power?

Generation from solar photovoltaics has benefited from government subsidies and the declining cost of panelsover the last decade, with capacity increasing from 95 MW in 2010 to 13,800 MW at the end of 2021. Electricity generation from wind power in the UK increased by 715% between 2009 and 2020, producing 75,610 gigawatt hours (GWh) in 2020.

#### How much solar power will the UK need by 2050?

To meet the UK government's net zero target, the Climate Change Committee estimates that between 75-90 gigawatts(GW) of solar power will be needed by 2050. Analysis by Solar Energy UK indicates this would mean solar farms would, at most, account for approximately 0.4-0.6% of UK land - less than the amount currently used for golf courses

#### How much energy do solar panels generate a year?

Annual generation was 14 TWh in 2022 (4.3% of UK electricity consumption) and peak generation was more than 11 GW. PV panels have a capacity factor of around 10% in the UK climate. Home rooftop solar panels installed in 2022 were estimated to pay back their cost in ten to twenty years.

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