

# Uk solar capacity factor





## Overview

---

The load factor of electricity from solar photovoltaics in the United Kingdom has fluctuated since 2010, amounting to 10.2 percent in 2023. This was significantly lower when compared to the load factors of other renewable sources.

The load factor of electricity from solar photovoltaics in the United Kingdom has fluctuated since 2010, amounting to 10.2 percent in 2023. This was significantly lower when compared to the load factors of other renewable sources.

Monthly deployment of all solar photovoltaic capacity in the United Kingdom. MS Excel Spreadsheet, 747 KB This file may not be suitable for users of assistive technology. Request an accessible format. If you use assistive technology (such as a screen reader) and need a version of this document in a.

Recently released statistics from the Department for Energy Security and Net Zero (DENZ) show that, in August 2024, the UK's solar photovoltaic capacity surpassed an astonishing 16GW. But what has this progress looked like over the last 14 years?

Did domestic installations increase steadily, or was.

The load factor of electricity from solar photovoltaics in the United Kingdom has fluctuated since 2010, amounting to 10.2 percent in 2023. This was significantly lower when compared to the load factors of other renewable sources. This can be explained by the lack of consistency in the number of.

The UK's solar farms and rooftops generated more electricity than ever before in the first five months of 2025, as the country enjoyed its sunniest spring on record. The figures, revealed in new Carbon Brief analysis, show that the nation's solar sites have generated a record 7.6 terawatt hours.

Solar capacity denotes the highest potential output of an entity, whether it's a country or a solar farm. In fact, the International Energy Agency (IEA) projects



approximately 310 GW of solar will be installed worldwide in 2024. This upward trajectory is projected to persist, with the IEA.

Solar photovoltaic is a renewable energy technology that utilizes sunlight in order to generate electricity. A photovoltaic system is comprised of one or multiple solar panels, made up of solar photovoltaic cells, and a solar inverter. Solar panels are either rooftop fitted or ground mounted and a. How much solar power does the UK have in 2024?

As of 2024, data from the trade association Solar Energy UK reveals that the United Kingdom's total solar capacity has reached an impressive 15.6 gigawatts (GW). Moreover, the sun's influence on our energy landscape is set to grow, with a remarkable 0.952 GW of solar PV capacity being added across the UK between June 2022 and June 2023 alone.

Why is solar power so high in the UK?

The extra sunshine this spring contributed to unusually high solar power output per unit of installed capacity, a metric known as the “capacity factor” of the UK’s solar plants.

What is the capacity factor of solar panels?

The capacity factor is a percentage, showing the actual electricity generation relative to the maximum theoretical output, if the panels were working at full capacity all of the time. Monthly average capacity factor of UK solar installations, 2013-25, %. Each line represents a different year, with 2025 shown in red. Source: Carbon Brief analysis.

How much solar power does the UK have?

After stagnating at around 12-14GW for several years after the then-Conservative government’s decision to end subsidies for solar in 2015, the UK’s installed capacity has since leapt to 20.2GW as of the end of 2024.

How has solar capacity grown in the UK?

In the UK, solar panel capacity has grown significantly since records first began! Before analysing the figures, first, some terms require clarification. The UK government’s statistics on solar photovoltaic capacity are organised according to cumulative capacity and cumulative count. What does ‘cumulative’ refer to in this context?



.

What is the load factor of solar photovoltaics in the UK?

The load factor of electricity from solar photovoltaics in the United Kingdom has fluctuated since 2010, amounting to 10.2 percent in 2023. This was significantly lower when compared to the load factors of other renewable sources. This can be explained by the lack of consistency in the number of sunny days recorded.



## Uk solar capacity factor

---



### What is capacity factor and how do solar and wind energy compare?

What is capacity factor and how do solar and wind energy compare? One of the most confusing aspects of renewable energy is the difference between installed (nameplate) capacity and the ...

### [Analysis: UK's solar power surges 42% after sunniest ...](#)

The capacity factor is a percentage, showing the actual electricity generation relative to the maximum theoretical output, if the panels were working at full capacity all of the time. Clean power While sunny weather helped drive ...



### Solar Panel Output , Exeo Energy

The solar panels are unshaded The solar panel s are at an angle from the horizontal of 35 degrees - most pitched roofs in the UK are similar to this The solar panels are facing south The panels are in the UK If all of these are true ...



### The reality of low power UK solar: the numbers don't stack

Poor UK solar energy yields Department for Energy Security and Net Zero data reveals the stark reality: solar power generation delivers



exceptionally low yields in the UK climate. On average, ...



### [UK offshore wind capacity factors - Energy Numbers](#)

Here are the average capacity factors for offshore wind farms in UK waters, newly updated to include data to the end of May 2022 (though there are still some figures to come through for the most recent couple of months, ...



### **The reality of low power UK solar: the numbers don't stack**

DESNZ data shows that in 2024, the entire UK solar fleet produced an average of just 9.9% of its total power capacity - essentially, the climate conditions in this country mean that across the ...



### **What Is the Solar Capacity Factor?**

Solar capacity is a fundamental metric in the world of solar energy, representing the actual output of a solar photovoltaic (PV) system relative to its potential output under ideal conditions. While determining the installed capacity of a solar ...





### [The UK's Solar Capacity Explained \(August 2025\)](#)

Astonishingly, the solar capacity in the UK had increased from 5,488.6 MW in 2014 to 13,259 MW in June 2019. On top of that, the UK's maximum net generating solar capacity was 13.1 GW in 2018, which placed it ...



### [Utility-Scale PV , Electricity , 2023 , ATB , NREL](#)

The capacity factor is influenced by the hourly solar profile, technology (e.g., thin-film or crystalline silicon), the bifaciality of the module, albedo, axis type (i.e., none, one, or two), shading, expected downtime, ILR, and inverter losses to ...

### [How to Calculate Solar Power Plant Capacity Factor](#)

The capacity utilization factor (CUF) is one of the most important performance parameters for a solar power plant. It indicates how much energy a solar plant is able to generate compared to its maximum rated capacity over a ...



### **The Latest UK Solar Photovoltaic Capacity Statistics ...**

Explore the UK's solar photovoltaic capacity growth, surpassing 16GW in 2024. Discover regional solar installation trends in England, Northern Ireland, Scotland, and Wales, and understand factors driving disparities in ...



### **UK: solar PV cumulative installed capacity 2023, Statista**

The cumulative installed capacity of solar photovoltaics (PV) in the United Kingdom during the last decade has increased massively, rising from \*\* megawatts in 2010 to \*\*\*\*\* megawatts by the end



## **Contact Us**

---

For catalog requests, pricing, or partnerships, please visit:  
<https://solar360.co.za>