

The Largest PV Plants Worldwide

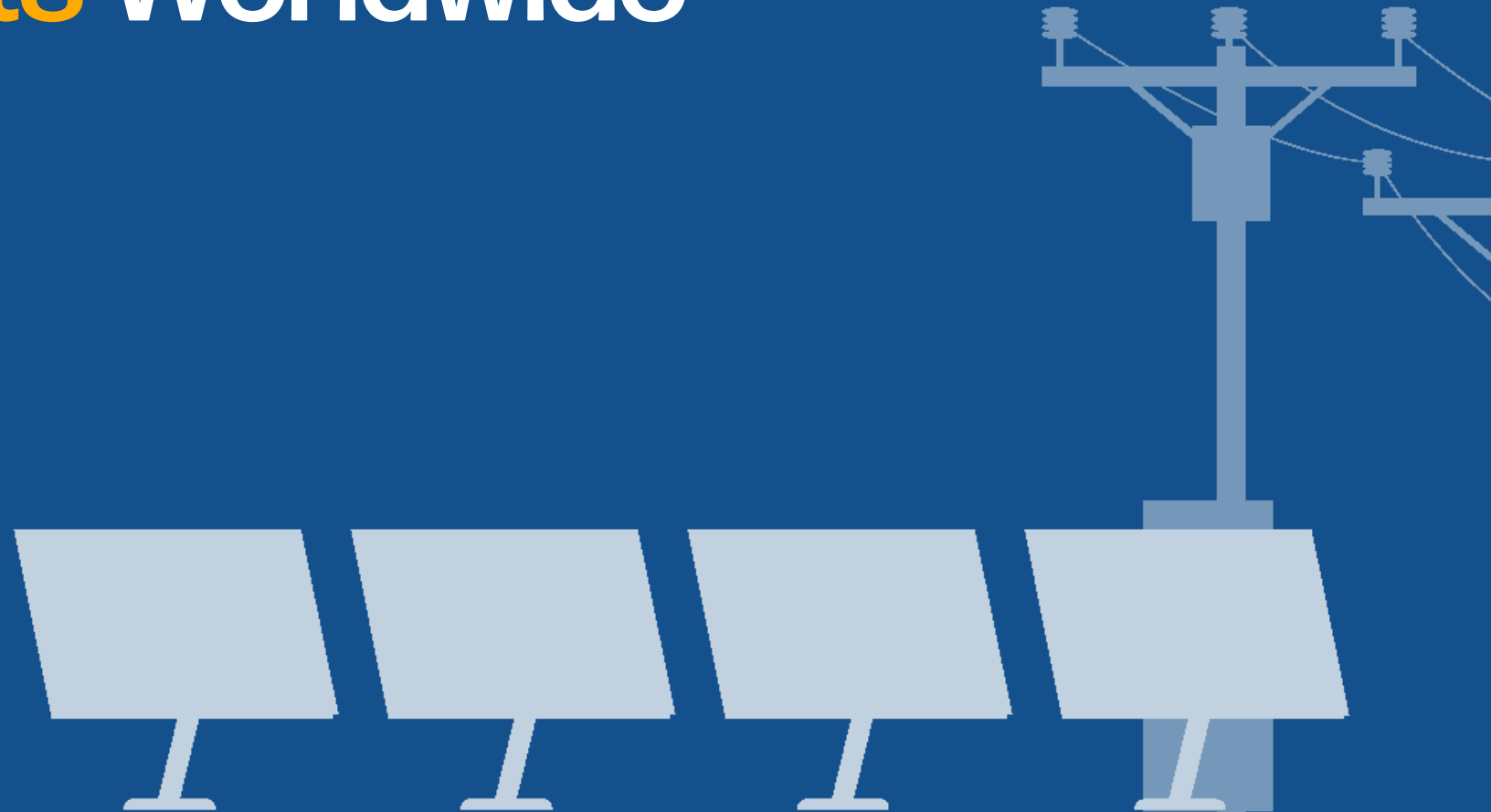


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Introduction

There are a number of renewable technologies spearheading the clean energy transition worldwide, including wind power, hydropower, and clean hydrogen. **One of the most important renewable technologies that is changing the energy landscape is solar photovoltaic (PV) energy.**

New PV projects have seen increased interest and investment in recent years, with 268 GW of solar capacity installed worldwide in 2022, a number that is expected to rise to 315 GW in 2023. In the EU alone, 41.4 GW of solar capacity was installed in 2022, up 47% from 2021.

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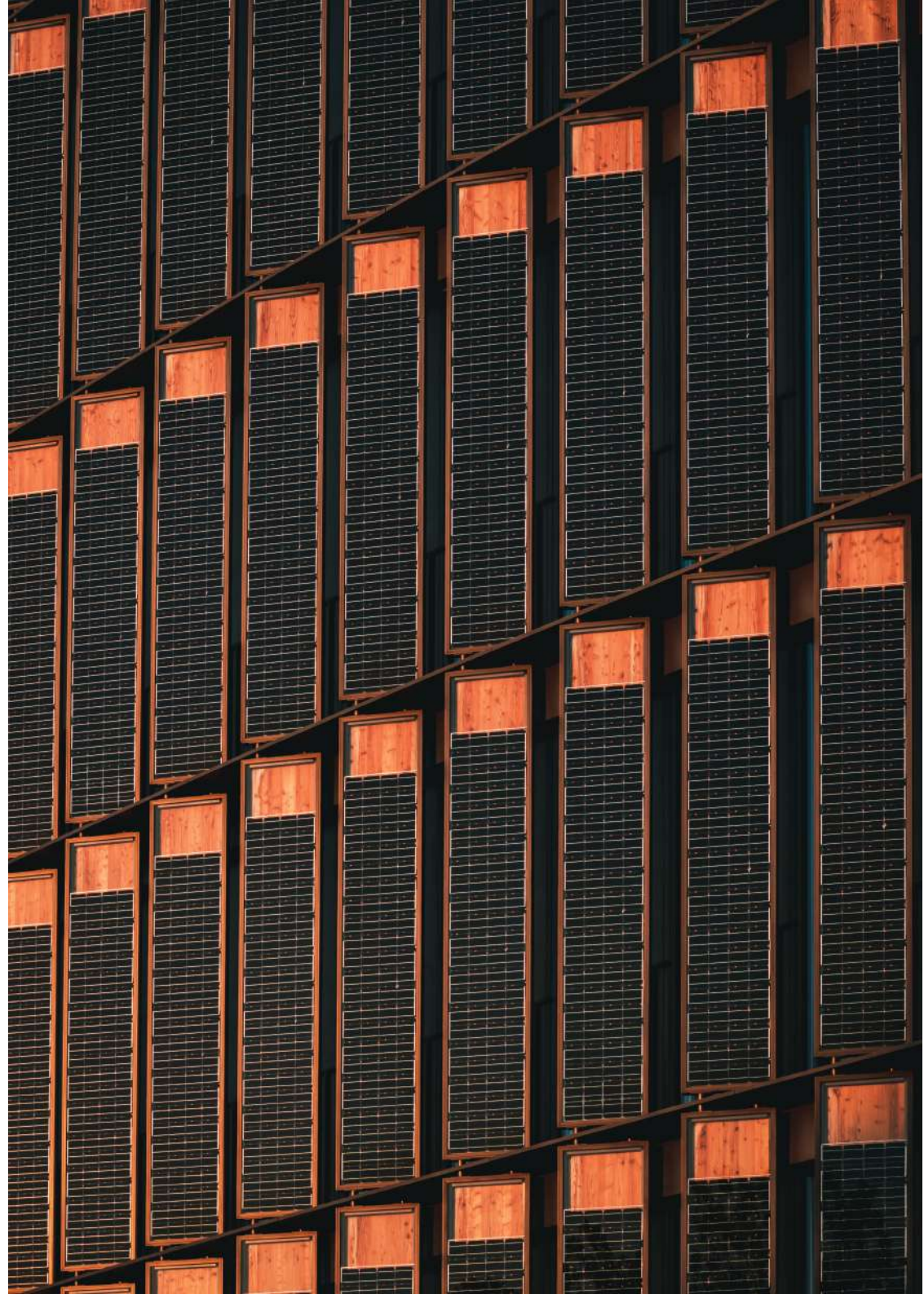
268GW

of solar capacity was installed worldwide in 2022

China continues to be the largest producer of solar PV energy in the world, as evidenced by the fact that 4 out of the 10 parks on this list are located in China. Have a look at [our recent ebook about China's clean energy projects](#) for more information.

Let's take a look at some of the largest PV plants in the world and some upcoming projects that will add further to global solar capacity.

The Largest PV Plants Worldwide



01

The 10 largest PV plants in the world

01. Bhadla Solar Park

 Rajasthan, India

 14,000 acres

 2700 MW

 Operating since March 2020

Currently **the biggest solar park in the world**, Bhadla Solar Park is located in the Jodhpur district of Rajasthan in India. Long days with little cloud cover provide ample sunlight for this installation, although frequent dust and sandstorms provide engineering challenges.

The 10 largest PV plants in the world



02. Huanghe Hydropower Hainan Solar Park

 Golmud, China

 12,355 acres

 2200 MW

 Operating since October 2011



Opened in Golmud in China, **there are plans to expand this park to include wind and hydro installations** for a total annual capacity of 16 GW.

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03. Pavagada Solar Park

 Pavagada, India

 13,000 acres

 2050 MW

 Operating since March 2018

The Pavagada Solar Park was opened in 2018. **The location is ideal for a PV installation due to the high elevation and solar radiation**, plus the low yearly rainfall, with the region being declared in drought 54 times in the past 60 years.

The 10 largest PV plants in the world



04. Benban Solar Park

 Benban, Egypt

 9200 acres

 1650 MW

 Operating since November 2019

The Benban Solar Park is divided into **41 separate lots, each of which was made available to a different contractor to build a plant.** These plants were then connected to the high-voltage network via four substations constructed by the Egyptian Electricity Transmission Company.

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05. Tengger Desert Solar Park

 Zhongwei, China

 10,625 acres

 1547 MW

 Operating since 2016

This installation was the largest PV park in the world when it was opened in 2015, but has since been overtaken. **It supplies energy to over 600,000 homes in China.**



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06. Mohammed bin Rashid Al Maktoum Solar Park

 Saih Al-Dahal, UAE

 19,000 acres

 1313 MW

 Operating since October 2013

Located about 50 km outside of Dubai, this PV park is part of a long-term project that will eventually also include concentrating solar power with a planned capacity of 3000 MW. **The park is one of the largest renewable installations in the world that is based on an independent power producer (IPP) model.**

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07. NP Kunta Ultra Mega Solar Park

 Nambulapulakunta, India

 7900 acres

 1200 MW

 Operating since May 2016

Opened in 2016, **there are plans in place to expand the capacity of the NP Kunta park to 1500 MW.** A bidding process in 2021 led to several companies being commissioned to open new plants at the site, including Spanish company Sprng Energy, who have entered into a partnership with Siemens Gamesa for their allocation of the project.

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08. Noor Abu Dhabi Solar Power Plant

 Sweihan, UAE

 2000 acres

 1177 MW

 Operating since April 2019

Although the Noor plant is on the smaller side in terms of acreage, it is the largest single-site solar power plant. The Abu Dhabi National Energy Company owns 60 percent of the project, with Marubeni Corporation and JinkoPower each holding 20 percent. The plant uses innovative waterless robot cleaning technology and provides power to 90,000 people.

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09. Jinchuan Solar Park

 Gansu, China

 8000 acres

 1030 MW

 Operating since 2019

Developed in a single phase, **the Jinchuan Solar Park is owned by Jinchuan Group and JinkoSolar Holding, each with a 50% stake.**

This park is in the Gansu region of China, an area that is home to many renewable energy installations, including wind and hydro plants.



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10. Danangouxiang Solar Park

 Danangouxiang, China

 22,700 acres

 1020 MW

 Operating since 2021

The Danangouxiang Solar Park sits on one of the largest plots of land for a solar park **currently**. Although it is 10th on this list due to capacity, there is more than enough space for the park to double in size in the coming years as more investment is pumped into the project.



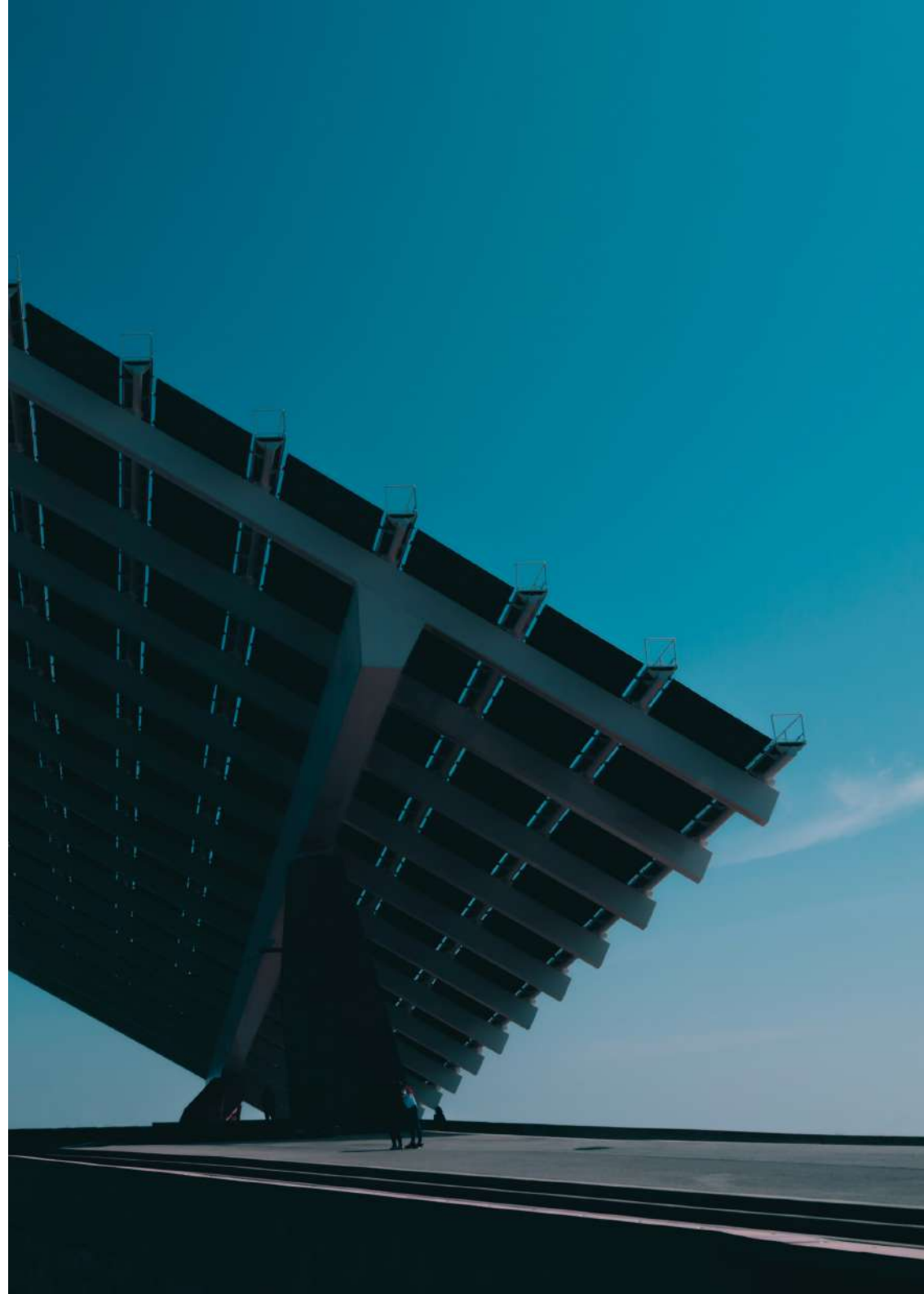
The 10 largest PV plants in the world

02

5 proposed PV projects

Now we've taken a look at the largest PV plants currently operating, let's explore some **new installations that are in the works.**

5 proposed PV projects



01. Australia-Asia Power Link

 Northern Territory, Australia

 30,000 acres

 20,000 MW



Planned to be the largest solar installation in the world, the Australia-Asia Power link was first planned to deliver renewable energy from Australia to Singapore. **There are still plans in place for most of the power generated to be sent to Singapore**, with some potentially also going to Indonesia.

The project was first planned with a capacity of 10,000 MW, which was later expanded to 20,000 MW in 2021. Construction was slated to begin in 2023, however, Sun Cable, the company developing the installation, went into administration in early 2023 due to disagreements between investors. Funding is now trying to be secured from other sources but the completion date of 2026 is now in doubt.

5 proposed PV projects

02. Asian Renewable Energy Hub

 Pilbara, Australia

 3,500 acres

 3500 MW



The Asian Renewable Energy Hub is a proposed wind and solar hybrid installation due to begin construction in 2023. The installation will cover a total area of roughly 1,645,800 acres split between solar panel arrays and wind turbines. **The total capacity of the project is expected to be 26,000 MW.** This was expanded from 15,000 MW when plans were added to use the power generated by the wind turbines and solar arrays to extract green hydrogen from water and create ammonia for export.

5 proposed PV projects

03. Ultra Mega Solar Power Projects

 Various locations, India

 Various

 500 - 2245 MW

The Ultra Mega Solar Power Projects are **a series of PV installations planned by the Indian government, each with a minimum capacity of 500 MW**. Some of these plants are already operational, such as the previously mentioned NP Kunta park, with more in construction. There are also plans to expand the capacity of existing installations. The goal is a total capacity of roughly 18,000 MW when all projects are completed.

5 proposed PV projects





04. Gobi Desert Wind and Solar Park

 Gobi Desert, China

 Undetermined

 450 GW

In March 2022, Chinese chief state planner, He Lifeng, announced **plans to build a gigantic wind and solar installation in the Gobi Desert**. The project is scheduled to be operational in 2030 and if targets are met, will provide more than double the total capacity of all current US installations.



5 proposed PV projects

05. Newmarket Solar Farm

 Newmarket, UK

 2800 acres

 Undetermined

A large solar farm has been proposed by the company Sunnica Ltd. near the town of Newmarket in the UK. The park plans to provide energy for up to 100,00 homes and is one of over 900 proposed projects in the UK. With a planned area of 2800 acres, **the Newmarket Solar Farm would be comfortably the largest solar park in the UK**, eclipsing the 250-acre Shotwick Solar Park that currently holds the number one spot.

5 proposed PV projects



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