

# SHOULD SOLAR PARKS BE LOCATED IN FIELDS?

## THE DILEMMA



Plans to build the biggest solar park in the UK have been given the go-ahead by the Government. The giant renewable energy facility will be built on 364 hectares (900 acres) of farmland in the Kent countryside.

The Cleve Hill solar park will cost £450 million to construct and it is hoped it will generate enough electricity to power 91,000 homes. Building work is expected to begin next year and be completed in 2023. Almost 900,000 solar panels will fill the space.

As well as being environmentally friendly, solar energy is becoming a much cheaper way of producing electricity than fossil fuels such as oil,

gas and coal. Solar parks are now 80% cheaper to build than they were in 2010. The cost of generating the electricity from solar power keeps falling, too. That means people's energy bills could drop, too.



A solar park in Fareham, England



Global warming is caused by fossil fuel emissions

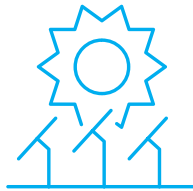
Renewable energy is obviously a good thing because it's clean and green, unlike fossil fuel energy

sources. The more renewables, the lower the harmful emissions, which means global warming will be reduced and climate change can slow down. But not everybody is delighted with the news about Cleve Hill. Local residents are worried about the effects of the solar park on the community. Some think it will be an eyesore (an unattractive thing that spoils the area), while others worry about the effect it may have on migrating birds at the nearby wetland site.

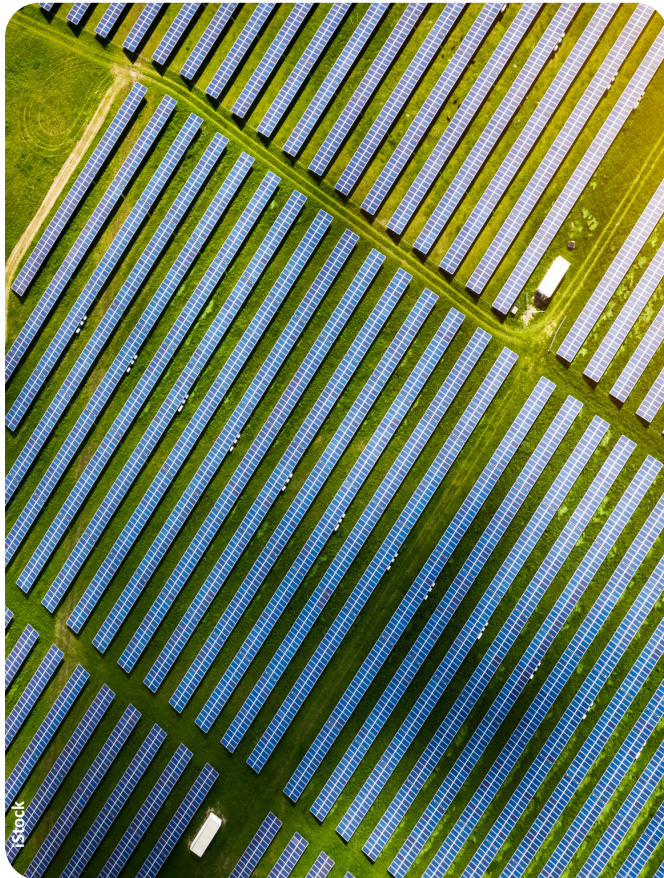
The Campaign to Protect Rural England, a countryside charity, has said that the battery storage facilities for the solar park will be enormous, which could increase the risk of dangerous explosions and fires.

Solar parks aren't the only way to harness the energy of the sun. Hundreds of thousands of people now have solar panels on their homes to generate green electricity. And some countries have built floating solar parks on water.

# WHAT IS A SOLAR PARK?



Also known as solar farms or solar fields, they are large sites containing panels that absorb energy from the sun. This generates clean, environmentally friendly energy that can be used to provide electricity to UK homes and other buildings.



# FACTS & FIGURES



A large solar farm in Gloucestershire

There are more than **400** solar parks in the UK.

Buying and installing a solar panel on a house costs around **£6,200**. That's almost **half** what it cost around **ten** years ago.

Between July and September **2019**, renewables in the UK provided more electricity than coal, oil and gas power stations.

Since **2010**, electricity generated from renewables has more than **quadrupled** in the UK.

**Gas** is the most used fossil fuel for energy in the UK, while wind is the most used renewable source. Wind makes up around **20%** of the UK's electricity.



Wind turbines off the Sussex coast in southern England

**Solar** is currently the least used of the renewable energy sources in the UK. It makes up about **6%** of our electricity.

But the UK had a record-breaking month for solar energy production in May 2020, producing **77 gigawatts** of electricity – that's **10%** of the country's total power output.

A **gigawatt** is a unit of energy. As it's a large amount (**one gigawatt = one billion watts**), it's usually used to measure energy at power plants.

A deal confirmed between the UK Government and the wind industry will ensure **three gigawatts** of our electricity comes from offshore wind by **2030**.

The UK aims to get almost all its power from low-carbon sources by **2030**.

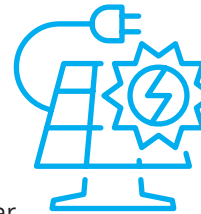
## ALL ABOUT ENERGY



For the past 100 years or so, electric energy has been the lifeblood that powers countries. Without it we wouldn't function because we need energy for virtually everything. From lights to communications to food production to construction, electric energy makes things happen in our homes, schools, factories, hospitals and workplaces. Electricity is powered by energy supplies, and in the past 50 years or so, our energy has come from one or more of these sources: fossil fuels (gas, coal and oil), nuclear energy or renewables (such as offshore or onshore wind, wave, tidal and solar).



## HOW SOLAR POWER WORKS



Solar power is very straightforward: energy from sunlight is caught in solar panels and converted into electricity.

In 2014, solar power in the UK almost doubled to 650,000 installations (solar parks and panels attached to buildings). This means there are now enough solar panels in Britain to supply electricity to the equivalent of 1.5 million homes. A great advantage is that a solar panel on a home can be used directly to provide electricity to that same home, and also contribute to the national energy supply. Solar power like this puts individual citizens in control of their energy source. However, the Government recently stopped a scheme to encourage people to get solar panels. More on that later.

## HOW SOLAR PANELS WORK



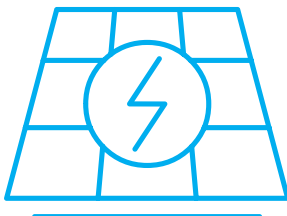
- 1** Cells on the solar panel absorb sunlight, even on cloudy days.
- 2** This light is turned into DC electricity. DC stands for direct current. This means the current only flows in one direction. Batteries use DC currents.
- 3** A device called an inverter converts this into AC electricity. AC stands for 'alternating current'. This means the current constantly changes direction.
- 4** This AC electricity can be used to provide power to things in the building the panels are attached to, or it can be sent to the national power supply for use in other buildings around the country.

## AROUND THE WORLD

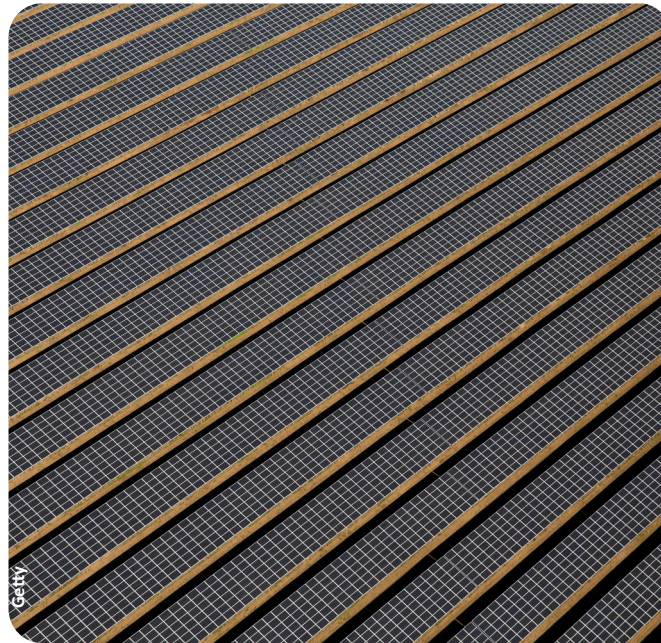


In terms of how much solar energy a country can access for their energy use, the UK is in eighth place worldwide. Here are the top five countries:

1. China
2. USA
3. Japan
4. Germany
5. India



Source: International Renewable Energy Agency



## ALL ABOUT CLEVE HILL



The new solar park in Kent will be five times bigger than any other solar site in the UK – the equivalent size of 600 football pitches! It will be located in a place called Graveney, between the bigger towns of Faversham and Whitstable. It will be built across 500 million square metres of farm and marshland. The electricity generated will be fed into giant batteries on site. The project is estimated to cost £450 million. A company called Cleve Hill Solar Park Limited is paying for it, and of course, they will make money from the electricity generated by the park when it's up and running.

## WILDLIFE CONCERNS



The land and wetlands surrounding the Cleve Hill site contain several habitats. According to local news in Kent, there are dozens of bird breeding species in the area, including the skylark, barn owl and yellow wagtail. There are also newts, bats and water voles. It's not known what effect the solar park could have on local wildlife. The company behind the park says it will take steps to protect animals, and that they have plans to preserve woodland in the area.



## THE MP'S VIEW



Helen Whately MP

Local Member of Parliament (MP) Helen Whately is disappointed that the Government has approved development of the solar park. She said: "We put forward a strong and positive message about how to make these marshes a better place for wildlife – but clearly it wasn't enough to win the argument. Many people will be shocked and deeply frustrated by this decision. The developers need to recognise the level of concern about their plans and work more closely with the local community."



Solar panels on a hospital in Suffolk, England

BUILDINGS,  
NOT FIELDS

You don't need solar parks to harness the sun's energy. Panels attached to buildings are another way of generating solar energy. They aren't cheap – an individual panel costs more than £6,000 – but that's a lot cheaper than it used to be. Some people think panels on buildings are less of an eyesore than huge fields of panels, too.

While hundreds of thousands of UK homes have solar panels fitted, there is still a long way to go. Encouraging people to 'go solar' has become a bit more difficult since the Government scrapped a scheme to give people money for it.

In 2010, the Government introduced something called the Feed-in Tariff (FiT) scheme, which

encouraged people to use renewable energy sources.

Electricity generated by solar panels on people's homes is exported and shared with others. The house-owner gets paid money by their electricity/gas supplier for the electricity they have generated, and the Government gives money to people to pay for part of the solar panels they have installed.

More than 800,000 households installed solar panels since the scheme was launched. But in 2015, the Government reduced how much they paid people by 65%, and in 2019 they stopped the programme altogether.

One alternative to solar parks is that the law should be changed so that all new buildings that are constructed must have solar panels fitted. Hundreds of UK schools already have solar panels fitted. But there's no doubt more buildings – including hospitals, offices and factories – could get them.

## YES, SOLAR PARKS SHOULD BE LOCATED IN FIELDS



### 1. THEY ALLOW FOR LARGE-SCALE SOLAR POWER –

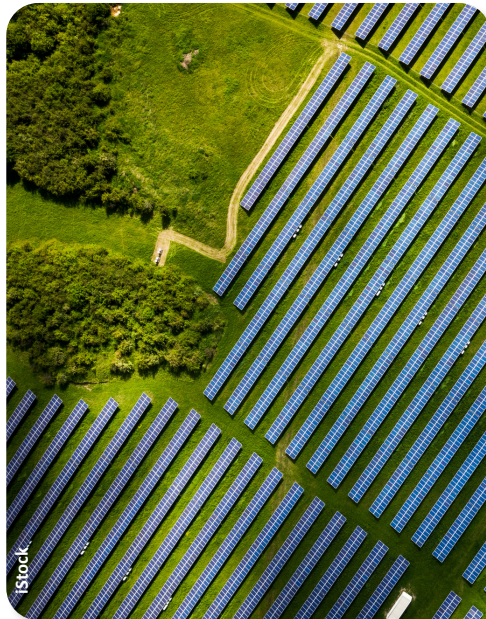
The new Cleve Hill site will provide enough energy to power nearly 100,000 homes. Only a solar park can provide large-scale, green, clean energy, and they're easier to build on fields than on water. They will help us reduce global warming and slow down climate change.

### 2. THERE AREN'T ENOUGH SOLAR PANELS ON BUILDINGS –

It would be great to see more solar panels on homes, hospitals, schools, offices and other buildings, but there's a long way to go. The Government isn't prepared to help get panels on to buildings, so we need solar parks more than ever.

### 3. GREEN ENERGY CREATES JOBS –

Switching from fossil fuels to green energy will create thousands of jobs here in the UK. According to the UK's renewable energy trade association, Renewable UK, the industry already employs more than 250,000 people. Solar only makes up 6% of the country's electricity. The more solar parks, the more solar energy, and the more jobs.



## NO, SOLAR PARKS SHOULD NOT BE LOCATED IN FIELDS



### 1. THEY'RE AN EYESORE –

Solar parks may be good for reducing global warming, but they are enormous and spoil the countryside. Local residents are complaining because they're the ones who have to look at it every day.



### 2. WILDLIFE COULD BE AFFECTED –

It's no good introducing an environmentally friendly solar park if it will damage the environment around it. Green energy is important, but so are animals. There's a risk to wildlife, trees and plants in the area around a large solar park construction. It's far less risky to put panels on houses and other buildings.

### 3. WE SHOULD FOCUS ON WIND AND HYDRO –

Solar power contributes far less energy in the UK than wind power. As an island, we have excellent opportunities for getting more of our energy from offshore wind farms in the North Sea, Irish Sea and English Channel. We can also harness the energy of the water to provide our energy.

DISCUSS

Why is renewable energy important?

DISCUSS

Should we have solar parks if they can damage the local environment?

DISCUSS

What are the advantages of large solar parks?

DISCUSS

Why is the UK in a good position to use renewables?

DISCUSS

Should the Government help schools to get solar panels fitted?

DISCUSS

Do you think individuals like you can tackle climate change, or is it only something the Government can do?

DISCUSS

Should the Government help people put solar panels on their homes?

DISCUSS

Should the law be changed so all new buildings have to contain solar panels?

DISCUSS

Would you mind living next to a solar park?

DISCUSS

What are the disadvantages of large solar parks?