

‘Low yield’ UK mega schemes ‘defy logic’ and are now targeting farmland the size of Derbyshire

“Agricultural land is being consumed by this government at an alarming rate. Farming capacity is being lost as tenant farmers are evicted. Whole counties are being covered in clusters of solar farms. Local communities are being ignored and experts are being overridden. Those are the realities of a solar strategy driven by ideology ahead of evidence” Joy Morrissey MP

The UK’s solar power strategy is fundamentally flawed. It prioritises new solar ‘NSIP’ proposals on farmland on an unprecedented, colossal scale. These mega schemes – typically with the footprint of an international airport – are wrong on every level. That’s why rural community groups from across the country have come together to form Stop Oversized Solar. We cannot support the sacrifice of good farmland for solar, which the government’s own data demonstrates is inefficient. We have serious concerns over the dubious economics of UK solar mega schemes. And we cannot stand by and witness the industrialisation of hundreds of thousands of acres of our countryside.

We focus on just some of the issues here, including expert views and comments from the solar sector itself.

The solar pipeline now targets more than half a million acres of farmland

According to the sector, and backed up by analysis of NESO’s TEC Register, the UK solar pipeline is now at 131GW – almost double the 2035 solar target. This would mean solar facilities covering around 655,000 acres, an area of farmland the size of Derbyshire. That’s three times the farmland claimed by the Department for Energy and Net Zero. Crucially, it represents 5% of all cropland, but with heavy targeting of key food-producing regions.

DESNZ has switched its strategy to prioritise solar super sites on farmland. It recently responded to lobbying from the sector to accommodate more mega projects by changing capacity targets to give developers a higher chance of securing all-important grid connections – and potentially crowd out thousands of small projects like retail and industrial park rooftop schemes or car park canopies, contradicting the line set out in the Solar Roadmap. Solar Media Market Research analyst Josh Cornes confirms the part grid-scale developers played:

“There’s huge potential for large-scale solar; with the announcement that distribution and transmission connected projects will fall into the same pot [for grid connections], transmission scale developers have definitely been heard.”

UK solar power is inefficient

Professor Michael Jefferson, former Deputy Secretary-General, World Energy Council, and contributor to the Intergovernmental Panel on Climate Change Nobel Peace Prize, sets out why ground-mounted grid-scale solar is a ‘grossly ineffective’ source of electricity generation in the UK:

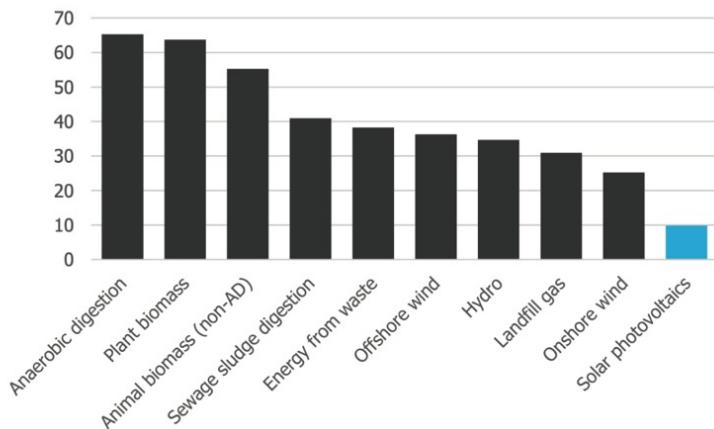
“Our annual average PV output per installation is around half that of southern European countries like Spain. The World Bank ranks the UK 229 out of 230 countries for solar power potential. This is due to features we can’t change – surrounded by seas and frequently beneath clouds, the varying intensity of solar irradiance during the seasons of the year, and latitude, determining our fewer daylight hours. Across the year, the resultant solar power is a grossly ineffective source of electricity generation for the UK. To place solar PV panels in grid-scale schemes on good agricultural land in a country that has to import about 40% of its food defies logic.”

There is a massive gap between UK solar capacity and solar output

Renewable energy expert Dr Pablo Ouro, Department of Civil Engineering and Management, University of Manchester, flags how critical the capacity/output gap is:

“Net Zero is not about how much capacity, how many gigawatts we install. It is how [much] electricity we can produce.”

For solar power in the UK, the difference between capacity and output is huge. DESNZ's latest annual data demonstrates how poorly solar power performs in our climate, revealing that solar struggled to reach even 10% of its capacity, and putting it last in its list of renewables:



Source: DESNZ Energy Trends: UK renewables – 2024 load factors (% of time energy generators work at capacity)

Farmland is being targeted because of low UK solar yields

In an off-the-record comment, a technical exec in the new build power sector admits why developers want to build solar sites on farmland:

“The reason why the UK is using fields not roofs is [because] our solar yield is too low to make it financially viable on roof tops, relative to fields.”

UK solar: powered by subsidies

Former World Bank energy economist Professor Gordon Hughes outlines what really powers the UK solar market:

“The UK is a notably poor location for the large-scale development of solar power ... Solar power in Britain is entirely dependent on subsidies.”

“...fundamental to solar NSIPs in the UK is the availability of a large volume of dumb money, without which these projects would be wholly uneconomic.”

Battery banks bring explosion and fire risks...

DNV, the global assurance and risk management services provider, warns that the lithium-ion battery storage needed to hold energy from highly intermittent solar power comes with explosion and fire risks – and they are a case of ‘when’, not ‘if’:

“Over the life of a [grid-scale] BESS at least one failure will occur. It is unrealistic to eliminate all chance of failure.”

...and lucrative energy arbitrage is motivating developers

Danish renewables giant Ørsted concedes that highly profitable energy trading is a key attraction for developers installing lithium-ion battery storage:

“A section of the battery storage is more about storing electricity when it is cheap to buy.”

Stop Oversized Solar

Community groups opposing Nationally Significant Infrastructure Project (NSIP) solar proposals: Block East Pye Solar • Claydons Solar Action Group • East Riding Against Solar Expansion • Fields of Glass • Hands Off Our Marsh • Kingsway Solar Community Action • Mallard Pass Action Group • No More Solar Farms Ynys Môn • Say No To Sunnica • Springwell Solar Action Group • Stop East Park Energy • Stop Greenhill Solar • Stop Lime Down • Stop Mylen Leah • Villages Against Solar Threat

Contact: stop.oversized.solar.uk@gmail.com