

UK solar power: exposing the biggest land grab since the Enclosure Act of 1773

- An area of **farmland the size of Derbyshire is now under threat of solar** power development
- The **Department for Energy Security and Net Zero has bowed to pressure from mega solar project developers and switched its solar strategy** to prioritise the development sector targeting well over half a million acres of farmland
- DESNZ's **strategy shift could crowd out thousands of retail and industrial park rooftop solar schemes, car park panel canopy systems and community-based land sites** from connecting to the grid
- The ground-mounted **solar pipeline stretches far beyond government claims** – it would cover three times the farmland claimed by DESNZ and is almost double the 2035 target

New campaign group Stop Oversized Solar is marking its launch by exposing troubling new figures on planned solar power land-take. Up to 5% of cropland is now at risk of solar development, threatening to take farmland out of use in some of the UK's best food-producing regions for decades, but more likely for good. Solar sites in the pipeline would cover around 655,000 acres – the equivalent of Derbyshire.

Stop Oversized Solar brings together a group of volunteers from across the UK committed to revealing the real story behind Nationally Significant Infrastructure Project solar mega schemes.

News of this new solar pipeline emerges alongside the Department for Energy Security and Net Zero's recent decision to change capacity targets in response to solar sector lobbying, making it easier for solar mega schemes – set to take up thousands of acres of farmland each – to get grid connections.

The National Energy System Operator, which is responsible for energy system operations, has already warned that connection queues are over-subscribed for solar.

The solar sector lobbying win could see warehouse, retail and industrial rooftop installations and other small scale, local schemes crowded out of grid connections – even though they are promoted in DESNZ's new Solar Roadmap. It is also likely to trigger more solar power switch-offs in the summer. NESO has already ordered solar sites to power down this year. Scheme owners are effectively paid to stop generating electricity.

Professor Tony Day of the Stop Oversized Solar campaign said:

"The government's strategy on solar is wrong – and the solar data that we are exposing is disturbing. The pipeline is now massively over target, with an area of farmland the size of Derbyshire set to be covered in solar panels running into hundreds of millions. The more solar capacity we install, the more we depend on an unreliable source of energy."

"And we are highlighting that targets have been manipulated after lobbying from the highly commercial solar sector, not based on need. We struggle to get even 10% average energy yields on solar, so it's much more logical to prioritise local solar schemes like commercial rooftop arrays or car park canopies instead of grid-scale mega schemes on good farmland. Now we could see these sensible schemes squeezed out while even more super-sized schemes get the grid connections."

"With hundreds of thousands of acres of UK farmland set to get consent nodded through for a change of use, and many solar developers part of international groups or with international private equity backing, this rural land-grab is controversial and should set alarm bells ringing. We are sleepwalking into a colossal countryside land-take."

ENDS

Stop Oversized Solar

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, developer probity and international supply chains. And we cannot stand by and witness the industrialisation of hundreds of thousands of acres of our countryside.

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Stop Oversized Solar community groups: 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

NOTES FOR EDITORS

1. Developers of solar schemes below 50MW capacity apply for planning permission via the relevant local authority. These sites are typically 100–200 acres in size. Any solar scheme above 50MW (changing to 100MW) is classed as a Nationally Significant Infrastructure Project, known as an 'NSIP'. To date, only one solar NSIP has been completed; the Cleve Hill Solar Park in Kent began operating within the last few weeks. At 900 acres, Cleve Hill is dwarfed by projects following it in the NSIP pipeline; the average scheme size is around 2,000 acres and one is over 7,000 acres. Mega scheme developers have to apply for a Development Consent Order via the national Planning Inspectorate, which manages the application and makes a recommendation to the DESNZ Secretary of State to grant or refuse a DCO. Ultimately, the SoS makes the decision and can over-ride the Inspectorate's recommendation.
2. The solar pipeline of 131GW was revealed during a [Solar Power Portal webinar](#) in June. The new pipeline total has been confirmed by Stop Oversized Solar's analysis of solar projects in NESO's [TEC Register](#), which lists projects that hold contracts for Transmission Entry Capacity, including existing and future connection projects.
3. The government's installed solar power capacity target for 2030 is 47GW; the 2035 target is 70GW.
4. Each installed solar power capacity of 1MW requires around 5 acres of land. A ground-mounted solar pipeline of 131GW equates to around 655,000 acres of land.
5. DESNZ has repeatedly claimed that solar land-take will be minimal, eg: "Even in the most ambitious scenarios, solar would still occupy less than 1% of the UK's agricultural land". The current solar power pipeline would cover 3% of our agricultural land. The majority of ground-mounted solar schemes target cropland and the solar pipeline would take out around 5% of cropland. The NSIP pipeline is not consistently spread across the UK, with counties including Cambridgeshire, Lincolnshire, Norfolk and Yorkshire particularly targeted for solar development. Under current plans, Lincolnshire, one of the 'bread basket' counties, would see the heaviest solar deployment; local MPs are seeing plans to develop solar sites on up to 9% of farmland in their constituencies. [The UK already imports 40% of its food](#).
6. NESO's [Clean Power 2030: Advice on achieving clean power for Great Britain by 2030](#), published in November 2024, states that the 2030 connection queue had a higher capacity of solar than is required (page 27). NESO allocates gate 2 grid connections according to its 'ready and needed' criteria in relation to regional transmission targets. It was apparent that many NSIP transmission projects in particular regions where the transmission capacity targets had been exceeded would not get the essential gate 2 grid connections in the current connections reordering process.

7. DESNZ has now changed solar targets to favour grid-scale solar developers. In December 2024, regional targets for solar were published in the annex to its Clean Power 2030 plan and split between distribution (small scale local solar arrays) and transmission (large ground-mounted grid-scale facilities). But in April 2025, in a backtrack on CP30, the separate targets were amalgamated in an “updated” annex, following pressure from solar developers over all-important grid connections.

The original annex to DESNZ's Clean Power 2030 report, published in December 2024, but no longer available online, set out separate regional distribution and transmission targets for solar power capacity. This shows the original set of transmission targets

Table 2: Regional capacity breakdowns for transmission connected technologies required for 2030 ¹² and 2035 ¹³						
Transmission network region	Solar (MW) 2030	Solar (MW) 2035	Onshore wind (MW) ¹² 2030 ¹²	Onshore wind (MW) ¹² 2035	Batteries (MW) ¹² 2030	Batteries (MW) ¹² 2035
N. Scotland	100	800	6,500	-	1,900	1,900
S. Scotland	600	800	8,800	-	3,900	3,900
N. England	500	1,400	-	-	800	800
N. Wales, the Mersey and the Humber	1,200	1,700	300	-	4,200	4,200
Midlands	4,000	5,200	-	-	1,300	1,300
Central England	2,100	3,200	-	-	500	500
E. Anglia	100	900	-	-	200	200
S. Wales and the Severn	1,100	1,300	1,300	-	900	900
S.W. England	300	300	-	-	400	400
S. England	200	200	-	-	100	100
South East England	600	1,100	-	-	1,700	1,700
GB total	10,800	17,000	15,900	-	15,900	15,900

Note: MW capacity figures have been rounded to the nearest 100 MW.

In April 2025, an [updated annex to the Clean Power 2030 report](#) was released, amalgamating the distribution and transmission targets

Table 6: Regional capacity breakdowns for technologies with amalgamated transmission and distribution network capacities for 2035

Transmission network region name	Transmission network region code	Tx + Dx Solar (MW) 2035	Tx + Dx Onshore wind (MW) 2035
N. Scotland	T1	2,500	-
S. Scotland	T2	2,600	-
Scotland total		5,100	21,200
N. England	T3	5,200	-
N. Wales, the Mersey and the Humber	T4	9,500	-
Midlands	T5	13,700	-
Central England	T6	9,500	-
E. Anglia	T7	3,300	-
S. Wales and the Severn	T8	8,300	-
S.W. England	T9	5,500	-
S. England	T10	2,300	-
South East England	T11	7,000	-
England and Wales total		64,200	15,800
GB total		69,400	37,000

Note: MW capacity figures have been rounded to the nearest 100 MW.

8. FOI requests by Stop Oversized Solar reveal that multiple grid-scale developers including Australian investment giant Macquarie’s Island Green Power, Clearstone Energy, Enso Energy, Innova and Low Carbon lobbied DESNZ Ministers on targets in November and December 2024. A Solar Energy UK open letter to DESNZ in February 2025 also called for transmission targets to be increased. Solar Media Market Research analyst Josh Cornes confirmed the part developers had 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.”

9. Combining the targets effectively increases the target for colossal grid-scale solar facilities, despite concerns that adding more and more mega solar, with established intermittency issues, will not support national energy security.

10. Accommodating excess transmission-scale solar scheme connections could crowd out grid connections from the much smaller scale, local distribution solar systems like commercial rooftop solar arrays, community projects and schemes like car park solar canopies.

11. [DESNZ's Solar Roadmap](#), published in June 2025, heavily promotes these ‘embedded’ systems. The tone is set in the forewords, with references including a “solar rooftop revolution”, “how to maximise the potential of solar canopies on car parks” and systems for “warehouses...reservoirs”.

12. Facilitating yet more mass-scale solar would almost certainly force more switch-offs at peak solar power generation points, even with the planned battery energy storage build-out – utility-scale lithium-ion battery banks can only hold energy for a couple of hours. [NESO warned that solar switch-offs were possible this summer](#) and to date [at least five have been ordered this year](#). Switch-offs trigger curtailment payments for scheme owners. Solar generates the highest energy output in summer, when demand is low, and the lowest in winter, when demand is high. Andy Brown, President of the Energy Institute and Deputy Chairman of Danish renewables operation Ørsted, cautioned: “[solar penetration will have an issue with too much solar](#) for those peak moments”.

13. The UK climate means it is ranked [229 out of 230 countries for solar power potential](#) by the World Bank. The latest annual DESNZ data reveals that [out of a national installed solar capacity of 17.8GW, solar power output was on average 1.77GW, only 9.9% of its total capacity](#).

14. The UK is an outlier in aggressively prioritising farmland for solar development; only countries with much higher solar yields from installed capacity favour land-take over built environment solutions like commercial rooftop arrays. Even in countries with higher solar yield capabilities, there are restrictions on farmland use for solar development, for example Italy has banned solar on agricultural land and France limits it. In Germany, which has a [higher solar power potential rating than the UK](#), the biggest two ground-mounted solar facilities have been built on an old mining site and a former airbase, not farmland, and none of its other ground-mounted schemes exceed 600 acres, with most being significantly smaller, reflecting very different priorities.

15. It is misleading to claim that mega solar schemes are ‘temporary’. Land is changing use to power production under the control of developers, not traditional rural landowners. NSIP schemes are 40–60 years each, take several years to build, and extensions are facilitated by [national planning guidance](#). Research shows that solar sites result in long term or permanent damage to high quality soil, making it more unlikely that developed land will return to productive farming ([Lancaster, Lancaster, ADAS](#)). NSIP project proposals do not combine genuine farming practices at scale alongside energy generation.