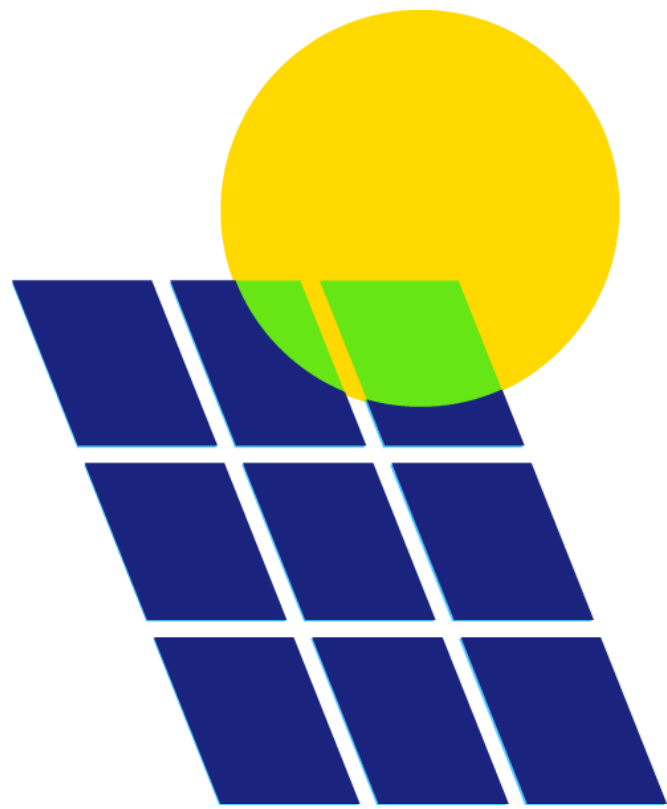




# Agricultural (Wales) Bill

## Economy, Affairs and Rural Trade Committee



## **About us**

Since 1978, Solar Energy UK has worked to promote the benefits of solar energy and to make its adoption easy and profitable for domestic and commercial users. A not-for-profit association, we are funded entirely by our membership, which includes installers, manufacturers, distributors, large scale developers, investors, and law firms.

Our mission is to empower the UK solar transformation. We are catalysing our members to pave the way for 40GW of solar energy capacity by 2030. We represent solar heat, solar power and energy storage, with a proven track record of securing breakthroughs for all three.

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Would you like this response to remain confidential? No

## **Introduction**

We welcome the opportunity to provide comment on the general principles of the agriculture (Wales) Bill. Our response focuses on how solar technologies can support the delivery of (Part 1) Sustainable Land Management and Support for Agriculture (Part 2) of the Bill.

Decarbonising the agricultural sector will be of great importance if Wales is to meet its net zero commitments. It is important to ensure that the agricultural sector is decarbonised as part of the broader economy. The Agricultural Bill will promote a new, up to date, farming system that supports landowners to continue agricultural practices and the delivery of tangential benefits such as biodiversity gain to meet climate objectives.

Solar technologies should be a core part of this and can support the decarbonisation of the agricultural sector by reducing energy bills, diversifying revenue for landowners, delivering clean, green energy, increasing biodiversity, and supporting the continuation of some agricultural practices now, and for future generations to come.

We thank you for taking our response into consideration.

## **Sustainable Land Management & Agriculture**

In principle, we agree with the four land management objectives detailed in the Bill – all of which are intrinsically linked. Solar is a versatile technology by nature and presents an opportunity to ensure the successful delivery of each, as explained below.

Evidence for the third UK Climate Risk Assessment for Wales, published in 2021, described climate change as the number one driver impacting food production patterns.<sup>1</sup> Climate change is already having a significant impact on Welsh and other agriculture. The UK Government Food Security Report, published in December 2021, is explicit: “The biggest medium to long term risk to the UK’s domestic production comes from climate change and

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<sup>1</sup> [CCRA-Evidence-Report-Wales-Summary-Final.pdf \(ukclimaterisk.org\)](#)

other environmental pressures like soil degradation, water quality and biodiversity.”<sup>2</sup>

The report quantifies this risk, noting that under a medium emissions scenario, climate change could reduce the proportion of ‘Best and Most Versatile’ agricultural land from a baseline of 38.1% to 11.4% by 2050. This would mean a reduction in the UK’s prime agricultural land of almost three quarters. Warmer temperatures and extreme weather caused by climate change are already impacting growing seasons. For example, the drought of 2022 literally caused the potato crop to shrink.<sup>3</sup> Solar farms help address climate change, and so help defend Welsh food security.<sup>4</sup>

Energy security is also important for farmers in enabling food production. Some farmers, like other businesses in the UK, will have faced potentially huge rises in bills caused by the energy price crisis.<sup>5</sup> This could be a catastrophe for farmers, who are already facing economic uncertainty. Solar presents an opportunity to address energy security and net zero commitments, in the context of agriculture and the delivery of sustainable land management objectives.

This is because, first, solar produces some of the cheapest electricity in history. This means solar can help the Welsh government achieve its target of 70% of electricity generation from renewable sources by 2035.<sup>6</sup> The UK’s 2022 renewable energy auction saw solar farms successfully bid to generate power at prices at least four times cheaper than gas.<sup>7</sup> Without solar, energy prices would be even higher. This is important, because costs are increasing for the agricultural sector, just like everyone else.

Second, farmers can receive direct rental and other income if they host a solar farm on part of their land. Solar farms offer long term, stable revenue, in an uncertain economic environment. Supporting farmers to take a holistic approach when managing their land (by increasing biodiversity, generating renewable energy and continuing agriculture) is important to help secure the future of farming. By providing financial security, solar is helping to keep farming profitable, and to allow for the continuation of traditional farming practices. Keeping farmers in business means securing food supply which is a key objective within the Bill.

#### Case Study: An example of how the diversification of income provided by solar farms is supporting the agriculture in Wales

*Mr and Mrs Rasbridge, landowners, and farmers in Wales, installed a 9MW and a 6.2MW solar farm on their land in Swansea.*

<sup>2</sup> <https://www.gov.uk/government/statistics/united-kingdom-food-security-report-2021/united-kingdom-food-security-report-2021-theme-2-uk-food-supply-sources#united-kingdom-food-security-report-2021-theme2-indicator-2-1-1>

<sup>3</sup> See eg <https://www.ft.com/content/2ed52263-9269-40ee-853b-11dd54d043a6>.

<sup>4</sup> Solar farms produce near zero-carbon electricity. See <https://www.carbonbrief.org/solar-wind-nuclear-amazingly-lowcarbon-footprints>

<sup>5</sup> [Businesses could see energy bills increase fivefold in October - Cornwall Insight \(cornwall-insight.com\)](https://www.cornwall-insight.com)

<sup>6</sup> <https://gov.wales/sites/default/files/publications/2022-06/energy-generation-in-wales-2020.pdf>

<sup>7</sup> <https://www.carbonbrief.org/analysis-record-low-price-for-uk-offshore-wind-is-four-times-cheaper-than-gas/>

*“The addition of solar on our land has provided us with a stable income at a time when the agricultural industry is becoming increasingly challenging. Throughout the farming cycle you only receive income when you are selling produce, however through the addition of solar, we know we can rely on the revenue every three months. Installing solar has diversified our income whilst allowing us to continue farming. We have also seen wider benefits, for example an increase in the amount of wildlife on and around the farm, which is great to see.”*

An emerging area of interest in the UK is agri-photovoltaics (agri-PV). Agri-PV demonstrates that solar energy technologies, agriculture, and environmental stewardship can go hand-in-hand. Combining solar with agriculture enables the expansion of PV generation while promoting food production and security. Agri-PV systems have the potential to generate higher crop yields, reduce water usage, and provide clean renewable electricity all on the same site, thereby significantly increasing land use efficiency.<sup>8</sup> Wales could see an increase in agri-PV over the next decade, following the successes seen in other countries such as Japan, Spain, and Germany.

In reference to the third land management objective, we strongly recommend that the Bill go further to maximise biodiversity alongside decarbonisation. This will feed into wider net zero commitments and support the enhancement of ecosystems and ecosystem services.

A growing body of scientific evidence shows that well-designed and well managed solar farms can support wildlife habitats and meaningfully contribute to achieving local and national biodiversity targets. The infrastructure disturbs only a small proportion of the total land allowing the remainder of the site to be set aside for ecological enhancements to support biodiversity. While there is no-one-size-fits-all approach due to the soil types, topography and climate of solar farms, there are some easy to achieve, cost effective opportunities which deliver significant ecological gain that can be applied to most solar farms:

- Seeding a diverse wildflower and grass mix over part or all of the site.
- Hedgerow planting and management around the boundary of the site. This includes filling in gaps of existing hedgerows or planting new hedgerows to join up existing hedgerows, for wildlife corridors or networks. Existing hedgerows may also be cut less frequently.
- A bund with a hedge planted on top can also be effective for both screening and to increase habitat.
- Planting native scrub or woodland in locations where panel shading is not a concern, which also provides screening
- Creating tussocky grassland around the margins between the security fence and the site’s boundary. Tussocky grassland is beneficial to a variety of different species and is generally easy to manage.
- Creating ponds, scrapes and other wetland features in low-lying wet corners of the site. Features implemented to manage site drainage, such as swales can also be managed for wildlife
- Providing habitat for specific species, such as hibernacula for reptiles and amphibians, bird and bat boxes.

Regular monitoring and surveys have typically shown increases in botanical diversity with

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<sup>8</sup> <https://www.solarpowereurope.org/interests/agrisolar>

corresponding growth in numbers of varieties of bumblebees, birds and butterflies as well as mammals such as brown hares and a range of invertebrates. Further, the addition of wildflowers and the lack of disturbance on a solar farm makes them good sites for apiaries, which can also boost pollination on adjacent agricultural land, increasing crop yields and supporting resilient UK food systems. Further information can be found in the Solar Energy UK – Natural Capital Best Practice Guidance.<sup>9</sup>

Finally, we agree on the need for Welsh Government to produce reports on the progress of the sustainable land objectives and wider goals as outlined in the Bill, periodically. This will ensure scrutiny of progress, that relevant stakeholders are held accountable, and that each objective is clearly tracked.

Throughout the preparation of these reports, we encourage the Welsh Government to utilise expertise in the agricultural and wider environmental industries as appropriate. Solar Energy UK stands ready to work with the Committee on the development of the Agricultural Bill and wider agri-environmental objectives.

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<sup>9</sup> <https://solarenergyuk.org/wp-content/uploads/2022/05/NCBPG-Solar-Energy-UK-Report-web.pdf>