

ZOOM IN UK FARMS



GreenBulb
Energy

UK farms are facing a challenging financial landscape due to a mix of systemic, economic, and environmental factors:

1

Post-Brexit Subsidy Reductions: The gradual withdrawal of EU farming subsidies post-Brexit has left many farms with significant funding gaps. The transition to new UK-specific subsidy schemes has been slower and less generous, leading to financial strain for smaller operations.

2

Rising Input Costs: Costs for essential inputs like fuel, fertilisers, and animal feed have surged due to global supply chain disruptions, inflation, and geopolitical tensions such as the war in Ukraine. This has significantly reduced profit margins for farmers.

3

Market Pressures: Farmers often face tough pricing pressures from large supermarkets, which demand low-cost, high-volume produce. This leaves little room for profit, especially for smaller farms that lack economies of scale.

4

Extreme Weather and Climate Change: Increasingly unpredictable weather patterns, such as prolonged droughts or flooding, disrupt planting and harvesting schedules, reducing yields and income reliability.

5

Labour Shortages: Post-Brexit immigration changes have reduced the availability of seasonal labour, which is crucial for tasks like harvesting. This issue has particularly impacted horticultural and fruit-growing sectors.

6

Economic Uncertainty: Broader economic stagnation in the UK has also weighed on consumer spending and investments in agriculture. Farmers struggle to plan long-term amid rising interest rates and fluctuating market conditions.



These challenges combined are creating an environment where many farms operate on razor-thin margins, forcing some to diversify or consider alternative revenue streams, such as renewable energy projects or agritourism.

KEY ENERGY USES ON FARMS

Farms are particularly well-suited to benefit from solar energy due to their energy demands, space availability, and the potential for cost savings. Here's a closer look at why solar panels are ideal for farms and how they can be utilised effectively:

1

Irrigation Systems

Pumps and motors consume significant energy, particularly during the growing season.

2

Refrigeration and Cold Storage

Essential for preserving perishable produce like fruits, vegetables, milk, and meat.

3

Lighting

Extensive lighting for barns, greenhouses, and animal shelters.

4

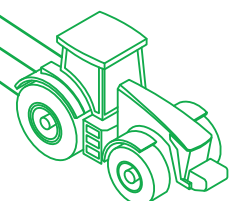
Heating

For livestock facilities, poultry sheds, and greenhouses.

5

Machinery and Equipment

Grain dryers, milking machines, and other essential farming equipment





WHY SOLAR IS PERFECT FOR FARMS

1. Abundant Roof or Land Space

- Farms often have large barns, outbuildings, or unused land that can accommodate solar panel installations without impacting operations.

2. High Daytime Energy Usage

- Many farming activities occur during the day, perfectly aligning with solar energy generation.

3. Energy Independence

- Solar panels reduce reliance on the grid, providing protection from rising energy costs and supply interruptions.

4. Sustainability Goals

- Renewable energy aligns with environmental stewardship, which is increasingly important for farm certifications and marketability.

5. Additional Income Streams

- Excess energy generated can be sold back to the grid under the Smart Export Guarantee (SEG), creating a secondary revenue source.

6. Tax Benefits and Incentives

- Capital expenditure on solar can qualify for government incentives, including tax relief and accelerated depreciation.

SOLAR SOLUTIONS FOR FARMS



1. Rooftop Solar Panels

- Barns, sheds, and other structures provide ideal surfaces for installing solar panels without taking up farmland.

2. Ground-Mounted Solar Panels

- Suitable for large farms with unused or low-value land. These installations can generate significant amounts of energy.

3. Solar-Powered Irrigation

- Dedicated systems to power irrigation pumps using solar energy, reducing operational costs.

4. Off-Grid Systems

- Deal for remote areas without grid access, ensuring energy availability for operations.

Several factors will continue drive the growth of solar farms in the UK

1. Supportive government policies and demand for renewable energy sources to decrease dependency on fossil fuels and carbon footprints.
 2. Declining costs of solar technologies and additional subsidies on solar systems.
 3. Growing energy prices in the domestic market have nearly tripled since 2000.
 4. Ambitious solar power targets, such as reaching 40 GW installed capacity by 2030
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HOW FARMS ARE BENEFITING FROM SOLAR

Solar panels save UK farms money in a number of ways. Here are just some of the reasons:

Improved financial health

Solar panels can help farms reduce operating costs, such as water pumping and heating.

Increased income

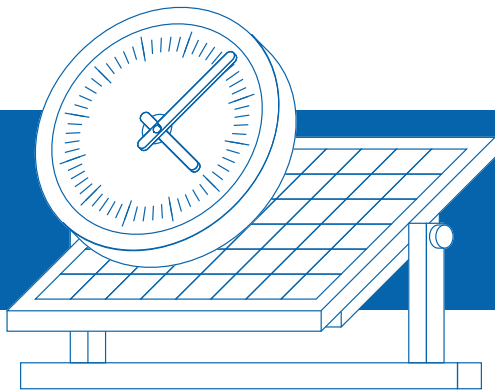
Farmers can earn extra income by selling excess energy back to the grid or leasing their land to energy generators. The average farm earns around £5,200 per year from solar.

Protection from rising electricity costs

Solar panels can help protect farms from future increases in electricity costs.

Reduced energy bills

Solar panels can provide free electricity for over 25 years.



The average return on investment for a solar farm in the UK is between 10 to 20%, meaning most solar farms pay off their installation costs within five to ten years.

The cost of solar energy has dropped by more than 80% since 2010. However, the cost to install solar panels depends on a number of factors, including:

01

The cost of the base materials and construction

02

The average cost per watt, which is determined by sunlight availability, infrastructure access, and land lease costs

03

Maintenance payments



CASE STUDIES AND SUCCESS STORIES

Many UK farms have already adopted solar energy successfully:

Dairy Farms: Use solar to power milking machines and refrigeration units, significantly reducing electricity costs.

Arable Farms: Solar panels drive grain drying operations and power irrigation systems.

Poultry Farms: Solar energy is used for heating and lighting chicken coops, improving sustainability.

NEXT STEPS

1

Energy Audit:

- Get in touch with Green Bulb Energy today and let us carry out a free assessment of your current energy usage to determine potential savings.

2

Feasibility Study:

- A space survey will let us analyse available space (rooftop or land), energy needs, and budgets together.

3

Partner with Green Bulb Energy:

- Work with Green Bulb Energy to get the best out of your configuration and start saving money and creating an additional source of income. Visit **www.greenbulb-energy.com** to check if your farm is eligible for the **100% fully funded program**.

Sources

1. [12]: A report from Farmers Weekly discussing the financial struggles of UK farmers due to rising input costs (e.g., fuel, feed, and fertilisers), Brexit-related subsidy reductions, and the broader economic pressures from inflation and supply chain issues. These challenges disproportionately affect small to medium-sized farms.

2. [13]: Insights from Investment Monitor, which covers the environmental and systemic pressures on UK agriculture, such as extreme weather linked to climate change, the historical dependency on synthetic fertilisers, and labour shortages exacerbated by Brexit. It also highlights the transition challenges to sustainable farming practices.