



Harvesting the sun:

Increasing rooftop solar in the North West

CPRE groups of Cheshire, Cumbria, Lancashire, Liverpool City Region and Greater Manchester

Harvesting the sun: Increasing rooftop solar in the North West sets out the urgent need to meet agreed greenhouse gas targets, shows progress to date against climate action strategies, the amount of installed solar by constituency across the North West area and it considers the experiences of different organisations. Based on the findings, it recommends how the next government can quickly progress action on solar energy by optimising wasted space, to avoid 'needless' loss of green fields.



Benefits of using wasted space

There are clear benefits of avoiding loss of farmland and urbanisation of our rural landscapes associated with solar farms, as smaller PV installations are more efficient, and quicker to realise through planning, yielding better electricity output and supporting growth with more jobs created compared to other technologies.

Global temperatures are warming faster than ever before. The graphic at the bottom of the page shows, cooler temperatures in blue, and more

recent years have been warmer shown in red. Science proves, beyond reasonable doubt, that human activity from burning fossil fuel is the main cause. The impacts of increased temperatures include ice cap melting, sea level rises, flooding, desertification and areas made uninhabitable due to floods and starvation, contributing to mass movements of people and the rapid decline in species.

CPRE supports decarbonisation of the energy supply and the government's solar energy target of 70GW by 2035

Decarbonisation is urgently required as economists show the cost implication of doing nothing is much more substantial compared to net zero action.

Carbon Budgets

The United Nations Framework Convention on Climate Change and the Paris Agreement, set carbon budgets for all countries to keep global temperatures at 1.5°C. Developed countries have higher carbon budgets as their total emissions are higher, taking into account historic emissions during industrialisation.

The UK Carbon Budget is 2,239 million tonnes of carbon dioxide (MtCO₂). The North West has the second highest budget in the UK, with 246.4 MtCO₂ allocated by the year 2100.

[CPRE's Shout from the rooftops report, May 2023](#) sets out research of University College London showing there is existing capacity for 117GW of solar energy from wasted space. It shows the government solar target proportions are the wrong way around. The data shows 60% of solar could





Harvesting the sun:

Increasing rooftop solar in the North West

come from rooftops and other wasted space and calls for the proportions of roofspace to solar farm to be switched to save land our farm fields.

[CPRE Building on our food security, 2022](#) evidenced that since 2010 the nation has permanently lost 14,500 hectares of its best agricultural land to development (housing, commercial, energy etc), which could grow at least 250,000 tonnes of vegetables a year. As more flooding is forecast due to the climate emergency, our food security is threatened, and we ought to plan energy development in the most sustainable way.



The Harvesting the Sun report, adds further evidence of benefits from rooftop solar, including increased energy efficiency and additional job creation for the North West area, when compared to other renewable technology types.

Renewable energy gains

The last quarter of 2023 reported that renewable electricity generation in the UK grew 7% over the year and increased to 44.5% of total energy generated, outpacing fossil fuel's share for the fourth consecutive quarter. In 2023 the UK was an exporter of electricity and over the last year, 2.9GW of new renewable capacity was added, equal to a 5.4% increase. The largest growth to new capacity was in solar PV, which at 1.1GW, is

the highest for almost six years and it continues to be driven by small scale installations.

Opportunities to build on renewable energy successes avoiding harm

Some local authorities in the North West are achieving more success on solar deployment than others. Cheshire East Council and the City-Regions of Liverpool and Greater Manchester are showing impressive ambition with targets for net zero by 2025, 2030, and 2038, respectively.

Solar energy supports more labour in the supply chain and has potential for 100,000 new jobs in the North West.

WPI Economics showcased international examples of rapid rooftop solar installation in the [Lighting the way report, April 2024](#). It shows where governments have focused energy investment and committed to solar rooftop, they have enabled rapid decarbonisation, avoiding volatile fuel prices. Good examples from approaches in Germany, Japan, China, Poland, and Italy are provided.

Germany's 'Solarstrombonus' is achieving ten times more rooftop solar than the UK

In the UK, there was a 'solar boom' when the 'Feed in Tariff' and 'Contracts for Difference' were operational but take up dropped off since the removal of government funding. Although there are some good examples of solar PV delivery, generally, **the UK lags behind other countries and the North West lags behind other regions of the UK**. The CPRE NW groups urges the next government to tackle such underperformance.





Harvesting the sun:

Increasing rooftop solar in the North West

UK100 shows the potential “growth opportunity” from decarbonisation, highlighting that the benefits are greater if we act faster. Its research points to a lack of policy clarity, capital awaiting investable propositions, infrastructure bottlenecks and planning system barriers. Commentators from the private sector, including the UK Warehousing Association, want the Solar Taskforce to be continued. There is a clear imperative for the government to support more rooftop solar. **Solar PV on roofspace would help reduce reliance on imported sources and risks from volatile prices and create more domestic energy and jobs.** It really is a win/win!



There are challenges associated with the installation of solar panels on rooftops, including issues related to building structure, grid connectivity, and energy storage that could be resolved. The case studies help to show good practice and where blockages in the planning system and grid capacity exist.

The Brownfield Registers identify where brownfield sites exist in each local authority area. As shown on the map, the large urban areas of Greater Manchester, Liverpool City Region, Preston and Lancaster have significant amounts, and compared

to the rest of the UK less of it is approved for development. Brownfield land in an underused, vacant, and neglected condition blight communities, causing poor health.

It is illogical to focus development on green fields needed for climate resilience, food production and potential for nature’s recovery when brownfield land exists in abundance as an alternative.





Harvesting the sun:

Increasing rooftop solar in the North West

Recommendations

A clear and consistent policy framework for solar energy at the national, sub-regional and local levels is necessary to achieve 60%, or more, of solar energy from wasted space. Improvement to national planning policy and guidance to encourage more rooftop/waste of space solar.

The next government should drive rooftop and brownfield solar PV, to decarbonise without ‘needlessly’ harming our countryside.

A mandatory requirement for the installation of solar panels on all new buildings should be introduced to achieve more rooftop solar and new incentives for retrofitting existing buildings. This is inline with CPRE’s response to the consultation on the Future Homes and Building Standard, 2023.

Funding support to enable more rooftop solar for domestic, commercial and farm based solar on rooftops and to overcome any barriers on brownfield land or grey space such as car parks.

Our team is keen to talk to people about achieving more solar energy from installations on rooftop and other wasted space.

We would welcome discussion with those who have ability to make positive change in the future and to keep our rural landscapes free of needless urbanisation.

Enquiries to: jackie.copley@cprelancashire.org.uk



Green field installation of solar PV ought only to be allowed as a last resort, guided by locational criterion based on environmental assessment to:

- avoid loss of Best and Most Versatile (1,2&3a) farmland, and where possible 3b prime pasture;
- avoid unacceptable loss of landscape character, particularly in National Parks and Protected Landscapes, but also in ‘ordinary countryside’;
- avoid Green Belt due to its important purpose of keeping land permanently open;
- and to avoid harm to nature’s recovery with commitments to support Biodiversity Net Gain of +10%, as introduced on the 12th of February 2024, in line with Local Nature Recovery Strategies.

