



Working on Sunshine:

How warehouses could double solar capacity for the UK

A major research project by the UK Warehousing Association has shown that the warehousing sector alone could double the UK's solar capacity, reduce carbon emissions by 2 million tonnes a year and deliver annual savings of up to £3bn.

Seems a 'no-brainer', so why isn't it happening?

At the end of 2022, the UK Warehousing Association revealed the results of a major research project into the potential benefits of retrofitting solar panels onto warehouse rooftops.

The report explored how renewable energy could contribute to the sector's journey towards net zero. And as warehouses transition towards electrification, with more EVs, robotics and automation, the rising costs of electricity and concerns around sustainable supply have added a critical imperative.

UKWA
The Voice of the UK Logistics Industry



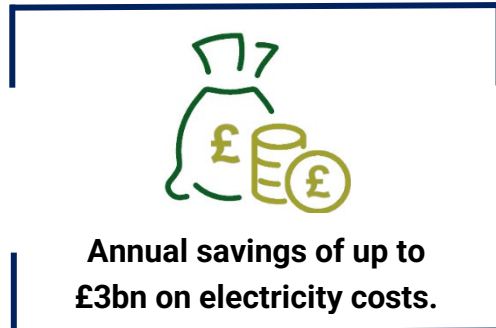
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Produced by specialist environmental researchers LCP (formerly Delta-EE), the independent report revealed some staggering results.

While warehouses account for a third of UK commercial roof space, UKWA has found that only about five percent of warehouses have any solar panels at all on their rooftops. Yet, if the sector were to embrace this opportunity, there is enough space for at least 15GW, which would double the solar capacity of the whole of the UK, reduce sector emissions by a significant 2 million tonnes of CO2 per

year, and deliver massive annual savings of up to £3bn on electricity costs.

To put this in context, the new Labour Government has set a target to triple solar power by 2030; and our sector alone could double it.



New ground-mounted solar farms have already been granted planning permission formerly denied by the Conservative Government and alongside this, the new Secretary of State for Energy Security and Net Zero, the Rt Hon Ed Miliband MP, has spoken about his plans to unleash a “rooftop revolution”.

There will be pressure on housebuilders to fit solar panels on new homes, but the payback for larger rooftops such as warehouses is usually significantly better because of the economies of scale.

Just 20 percent of the largest warehouses would represent 75 million square metres of useable roof space – equivalent to the footprint of 500,000 houses.

Why Solar?

Despite the pressure on our economy to become more energy efficient, we are seeing a significant and ongoing increase in the amount of electricity that businesses and consumers use, as transport and heating transition away from old-fashioned fossil fuels. Even forklift trucks, once largely gas-driven, are now more likely to be electric, powered by batteries. Solar energy is widely predicted to be a major part of the solution to our

future energy needs, providing low cost, secure and green electricity.

There are several reasons why warehouses are the ideal location for solar panels. They feature large and relatively unobstructed flat roof spaces, which are high enough to be out of sight.

Typically, warehouses are close to industrial and residential centres too, where energy is needed – remote renewables such as offshore windfarms suffer from ‘transmission losses’ where some of the power is lost as it travels down the cables to the place where it will be used. So it’s advantageous to generate renewable energy very close to demand. As the price of electricity has gone up and the price of the panels has reduced, it might seem increasingly obvious to install solar panels on all our thousands of warehouse rooftops. Why then has this option so far been largely unexplored and untapped?



On closer inspection, the retrofit of warehouse rooftop solar can be fraught with potential challenges, from limitations of the National Grid infrastructure, long delays caused by the monopolistic Distribution Network Operators (DNOs), as well as stakeholder complexity (the sometimes conflicting interests of warehouse developers, landowners and tenants). Warranties from roofing manufacturers and insurance policies can be compromised too, if the installation is not well managed. All these factors pose

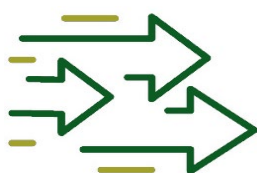
significant barriers to the adoption of rooftop solar power.

Step changes

Despite the undoubted challenges that remain ahead, there are reasons to remain optimistic. Some positive progress on rooftop solar has already been achieved since the launch of our campaign in 2022.

For example, last year, there were changes in the planning permission rules about 'permitted development' which have already made installation of rooftop solar panels easier, removing the previous 1MW restriction. This will speed up solar rooftop projects, providing significant cost savings for businesses looking to embrace renewable energy.

In the same month, new rules were announced by Ofgem to speed up electricity grid connections for viable projects, allowing stalled or speculative so-called 'zombie projects' to be forced out of the queue. This change replaced the existing 'first-come, first-served' system, which had resulted in a long queue of energy projects waiting to be connected.



**Build now, at pace,
for the future.**

In May this year came another important announcement. This time from the National Grid itself, whose full year results statement was accompanied by a commitment to a five-year £60 billion investment plan to 'build now, at pace, for the future'. UKWA has long been highlighting the urgent need for such

infrastructure investment and demanding the overhaul of both the National Grid and the DNOs, which we believe are not fit for purpose to meet the climbing demand for renewable energy.



**Green energy is firmly on the
new government's agenda.**

A brighter future

Green energy is firmly on the new government's agenda, with promises that Britain will become an 'energy superpower' by scaling up renewables. The Great British Energy Company is a central plank of the £5bn annual 'green prosperity plan' and a budget in excess of £1.5bn to deliver clean energy projects and boost the UK's energy security has already been announced. According to the Secretary of State, "this funding will accelerate the delivery of clean, cheap, low-carbon electricity to families and businesses, generated by renewable energy technologies such as wind turbines and solar panels."

In further good news, the government has also opened a consultation on proposals to make further changes to the planning rules for solar projects. The consultation on the National Planning Policy Framework (NPPF), is intended to drive forward renewable energy generation, and has been welcomed by Solar Energy UK.

As the voice of the warehousing industry, UKWA is working hard to engage with new Ministers and raise awareness of the huge potential contribution our sector offers in meeting ambitious targets. We are determined to keep up the pressure on

all policy influencers to facilitate solar power on warehouse rooftops. Our UKWA Policy Manifesto calls for a successor to the Solar Taskforce (the body responsible for producing the Strategic Solar Roadmap), to maintain momentum with commercial rooftop initiatives and accelerate the decarbonisation of the electricity network.

The warehousing sector should be an 'easy win' in making progress toward net zero, and it is our job to ensure government fully understands the deliverable benefits of warehouse rooftop solar power, not only for our sector, but for the whole country.

This is the beginning of a quiet revolution. If you are passionate about the environment and want to make a difference to climate change, find out more about rooftop solar - and take a fresh look at building a career in the warehousing sector!



About the author

I'm Clare Bottle, Chief Executive of the UK Warehousing Association (UKWA) and Vice-Chair of Women in Logistics UK.

I didn't originally plan on joining the logistics industry – in fact I'd never heard of it! – but the first job I was offered after graduation happened to be at British Road Services (BRS), where I discovered this fascinating world, with so many opportunities. I've worked in the sector ever since, and before joining UKWA, was Associate Director of Warehousing at Coca-Cola Europacific Partners.

I'm passionate about economic, social and environmental sustainability and I love talking about warehousing!

Information and suggested further reading:

Find out more:

Articles

UK Warehousing Association - [Investment Case for Rooftop Soar Power in Warehousing](#)

Information

UK Warehousing Association - [UKWA | The Voice of Warehousing](#)

Careers

Generation Logistics - [Generation Logistics | Where Talent Meets Opportunity](#)