

PowerPulse

October 2025

A monthly snapshot of the ever-changing power outlook in the UK



‘Three quarters of Great Britain’s electricity came from low-carbon sources in 2024’

Ben Bowler,
Technical Director

The first official figures on the UK’s progress towards Clean Power 2030 brought good news for energy users and the industry this month. Three quarters (74 percent) of Great Britain’s electricity came from low-carbon sources in 2024. This is up from 68 percent in 2023.

Power Pulse keeps track of power availability and how the UK is trying to keep up this momentum. This month, we’ve seen local authorities factoring wind farms into their local plans. We also see geothermal developments and imminent funding for hydrogen storage. And we consider the broader application of compelling technologies like second-life batteries.

Social value is a critical opportunity for energy developments. Collaboration, clear communication, and stakeholder engagement are also key to making progress and meeting the UK’s growing electricity needs. Keep reading to find out more.

Spotlight of the month

The benefits of community-level action

Last month, I mentioned that there is a strong theme of democratisation of power in the industry right now. Community-led energy projects are key to achieving Clean Power 2030. They present opportunities for energy companies and users, investors, and communities alike.

There is a growing body of support available. This includes funding. The challenge is making people aware. Now, organisations are also offering more support to community energy projects as part of their social value programmes. And energy providers are piloting new business models.

Let’s look at a few examples:

- The government recently added a further £5 million to its [Great British Energy Community Fund](#). This aims to help kickstart projects including wind, solar, and battery storage. It can also support district heating, electric vehicle charging points, and fuel poverty alleviation schemes.
- [Energy Local Clubs](#) bring households and renewable generators together to increase low-cost, local energy use.
- E.ON is piloting a ‘UK-first’ [solar-sharing scheme](#) in London. The installation of 270 solar PV panels on a school is expected to serve 50 percent of the educator’s needs. Any excess solar energy generated will be offered to nearby homes at a discounted rate.
- Kent Community Energy has launched a [£400,000 community share offer](#) to local residents. It aims to encourage people to invest small amounts in the installation of solar panels on community spaces such as care centres and colleges. The benefits include reduced energy bills, reduced greenhouse gas emissions, and a target return of 6 percent per annum.

It is exciting to see this community-led democratised approach unfold.

Tom Shilton, Director



Geothermal

Here are two signs that momentum is building around geothermal energy in the UK:

1. The National Geothermal Centre and Renewable Energy Association have signed a [memorandum of understanding](#) to advance geothermal deployment across the UK. In a positive step for the industry, they will combine their efforts to drive policy, investment, and regulatory progress.
2. Meanwhile, the University of York has reached an exciting stage of its important geothermal energy project. Seismic surveys are being carried out to help them understand the potential energy output.

The sector continues to face the same challenges as many infrastructure projects, as shown by the planning refusal of a planned geothermal power plant in Cornwall. However, geothermal is an increasingly exciting place to be.

Leon Warrington, Technical Associate

WHAT'S HAPPENING AT THE UNIVERSITY OF YORK? →



Solar

There is a debate about how the UK should be aiming to deliver the solar capacity it needs to meet its energy demands as outlined in Clean Power 2030. What is the right balance between small-scale solar installations and large-scale solar farms?

The debate is rooted in the fact that solar is inherently modular. This means that small-scale installations can generate electricity where it is needed. On the other hand, large solar farms generate a lot of renewable power, but that energy needs to be transmitted to end users. This often requires major grid upgrades. Some of the energy is also lost.

The debate will affect how easy it is for energy users to benefit from solar. The government's zonal energy pricing plan was expected to encourage more local energy generation. Now that this has been dropped, we await to see how these questions will be addressed.

[Tom Shilton](#), Director

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AND WHAT HAPPENS NEXT →**

Grid

Social value is an important dimension when developing grid upgrades. From a technical perspective, communities expect a safe and well-functioning grid that meets their electricity needs. From an environmental perspective, projects can achieve biodiversity net gain and restore habitats.

We held a roundtable to discuss how to add value to communities while upgrading the grid. Key takeaways from our team, a professor, and a peer included:

- We must embed social value throughout delivery, not just procurement.
- We need to link social value metrics back to local, regional, and national goals.
- Industry collaboration is essential to embedding social value by design.
- Visual modelling and AI tools could improve consultations and public understanding.
- Good communication is key. It not only facilitates technical execution but also enhances social value and public acceptance.

[Sophie Lee](#), Director

READ THE ROUNDTABLE'S VIEWS →





Nuclear

After the UK and US governments signed a new deal to develop advanced nuclear energy, the question is: how can we build at scale to meet our growing energy needs? Two of the biggest challenges will be strengthening the supply chain and growing the workforce. These will be key areas of focus for nuclear developers and the governments alike.

Huge leaps and bounds are being made in the technological development and commercial viability of fusion technology. Fusion is covered in the deal. It is potentially more energy efficient and energy dense than fission and produces less waste.

First Light Fusion, for example, has revealed [a new process](#) that uses two stages instead of one and significantly increases the energy output. It is a phenomenal development that should further increase people's confidence in nuclear technology meeting more of our energy needs in the future.

[Peter Sibley](#), Director

WHAT HAVE THE UK AND US AGREED? →

'UK demand for hydrogen storage could reach 56 terawatt-hours by 2050'

Hydrogen

The government is due to launch its [hydrogen storage business model](#) (HSBM) soon. The first funding allocation rounds are expected in early 2026.

This follows a [briefing note](#) from the British Geological Survey. The note said that underground hydrogen storage is a critical enabler for the UK's energy transition. This source of long-term storable and dispatchable energy could be fundamental to a flexible and stable energy system. Top-level estimates indicate that UK demand for hydrogen storage could reach 56 terawatt-hours by 2050.

We need scalable solutions. The range of options in the UK include salt caverns, lined rock shafts, and depleted hydrocarbon fields. A number of strategic projects have recently received private investment, including in [Aldbrough](#), [North Yorkshire](#), and [Cheshire](#). With the HSBM around the corner, the UK could be laying the groundwork for a resilient energy system underpinned by long-duration hydrogen storage.

[Neil Calder](#), Principal Consultant

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Wind

After the Labour government lifted the de facto ban on developing onshore wind farms, we are starting to see local authorities create opportunities for wind in their local plans.

Rutland County Council is one example. At a hearing on 18 September, they discussed which areas would be suitable for large wind farms as part of a new local plan to 2041.

This would have been unthinkable five years ago. It marks a significant turning point for the wind industry and should pave the way for small, medium, and large wind farms in suitable areas. For energy users, this means more opportunities to decarbonise their energy supply. Thinking about adding a turbine to your site? Discuss your plans with the local council to make sure it is included.

Joseph Padbury, Associate Director

SEE HOW RUTLAND IS FACTORING
WIND INTO ITS LOCAL PLAN →

‘The promise of low or even zero bills is a growing trend to encourage the rollout of domestic storage’

Battery storage

We continue to see strong investment in battery storage. This ranges from grid-scale sites to domestic solutions, which include two-way power flows. The latter is especially promising given the rate at which we need to grow behind-the-meter installations in the UK.

Continuing our recent theme of flexibility, it was interesting to see Voltalis and Powervault launch what they called the UK's first consumer-led energy flexibility solution for domestic storage. This allows consumers to turn their solar batteries into revenue-generating assets. The promise of low or even zero bills is a growing trend to encourage the rollout of domestic storage. We need to see more of these kinds of initiatives in the coming years to grow the market in line with Clean Power 2030.

Tom Shilton, Director

VOLTALIS AND POWERVULT PARTNER
ON FLEXIBILITY SOLUTION →



‘Second-life batteries are not just a waste solution’

eMobility

On 28 September, the government accepted the recommendations of its New Towns Taskforce. This included 12 locations for new towns and a placemaking principle of ‘environmental sustainability’.

Second-life electric vehicle (EV) batteries offer a chance to embed circular energy systems into these developments from the start. Retired from vehicles, the batteries retain up to 80 percent of their capacity. When repurposed for stationary storage, they can store excess renewable energy to support solar PV, grid balancing, and local energy resilience. They can also provide backup during outages.

Nottingham City Council’s 600-kilowatt second-life **battery system** powers municipal buildings and EV fleets. It also reduces peak grid demand. For new towns, these batteries could be used in energy centres, schools, or shared residential systems. Second-life batteries are not just a waste solution—they are a scalable, low-carbon asset for powering future-ready communities.

Ben Bowler, Technical Director

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