

Power Pulse May 2025

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



"The energy sector is in many ways a truly globalised sector"

Peter Sibley, Director

It was a privilege to join global clients and colleagues at the Canadian Nuclear Association's annual conference last month. The show, which took place in Ottawa, featured 1,700 delegates. There was a world-class line-up of speakers and around 80 exhibitors. It was an impressive event.

Events over the last month have reminded us that the energy sector is in many ways a truly globalised sector. Yes, there are significant variances between markets. Political. Financial. Climate. Geological. But technology, innovation, and ideas travel.

It's always worth keeping tabs on what's happening around the world in energy. The knowledge, skills, and technology in this sector can cross borders, given the right conditions.



Spotlight of the month

Connections reform approval: Who, what, when?



On 15 April, Ofgem approved the National Energy System Operator's (NESO's) proposals to reform the process to connect to the electricity transmission network. It's been three years since the proposals were first mooted. So, what happens next?

There is now a standstill period until 10 June to allow for the necessary licence changes. From 8 July, the Gate 2 evidence submission window for transmission-connected customers will open. During this time, projects with an existing connection offer will need to provide evidence of land rights and planning submission to retain their place in the queue.

From September, NESO will start to issue revised offers to projects that are proceedable. It will prioritise those that are connecting in 2026/27. It will issue all offers for connections up to 2030 by early 2026. NESO anticipates that the existing connections queue will reduce from over 700GW to approximately 296GW. The reforms will impact different regions in varying ways. Many will see connection dates brought forward. Particularly constrained areas, like West London, are not expected to see a major drop off in connection offers, so connection dates are unlikely to change significantly.

New applications are still on hold and there is currently no confirmed date when this will open again. NESO has indicated that the next Gate 2 window will be open by the end of 2025.

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Wind

It can be logistically challenging to transport wind turbine components to remote sites and industrial complexes. This becomes even harder as turbine sizes continue to increase.

Onshore turbine blades typically range from 45 to 60 metres in length. Tower sections can be up to 6 metres in diameter. The hub also presents significant dimensions, adding to the complexity of navigating tight corners, narrow roads, and low bridges.

Risks should be assessed at the feasibility stage. This means we can identify where modifications or alternative routes may be needed. Early planning can prevent costly delays, protect infrastructure, and keep projects on track.

<u>Joseph Padbury,</u> Associate Director

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"Transporting wind turbine components is becoming even harder as sizes continue to increase"



"In the UK, solar carports is still an untapped opportunity"

Solar

On 7 May, the UK government launched a call for evidence on mandating the installation of solar canopies in new car parks. Solar carports can be an effective way to reduce energy bills and decarbonise energy supply. It also goes hand-in-hand with electric vehicle charging infrastructure.

Countries like France have already legislated for this. In the UK, it is still an untapped opportunity.

Any development with a parking lot or similar area (e.g., a walkway) should consider this as an option. It's particularly well-suited to constrained sites and sites where rooftop solar isn't possible (e.g., due to plant on the roof), especially where there's a minimum requirement for planning permission.

Tom Shilton, Director

RESPOND TO THE CALL FOR EVIDENCE \rightarrow

eMobility

On 23 April, the UK government published its response to a consultation on 'energy smart appliances'. This requires that electric vehicle chargers installed after the end of 2027 are capable of being controlled remotely. It also applies to heat pumps and grid-connected domestic storage batteries.

The benefits? Energy retailers, utility companies, and distribution network operators can manage charging demand in line with network conditions and deal with peak loads. For consumers, they can 'trade' their willingness to be flexible on when they charge for reduced energy costs or other rewards.

The consumer will always have the option to retain control. And there are requirements for cybersecurity and grid stability. The announcement will be followed by a 20-month implementation period before enforcement. This is expected to conclude by the end of 2027 at the latest.

Ben Bowler, Technical Director

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Battery storage

Battery suppliers used May's Intersolar Europe trade show in Munich to release new or enhanced PV-coupled battery systems for residential users. Battery storage was one of the biggest topics. This reflects changing regulations and reductions in the price of technology.

The German Solar Association explained that it considers battery storage to be the quickest and least invasive way of integrating solar energy into the market in a simple and system-friendly manner. Many of the new launches featured AI forecasting and control. This helps to manage dynamic tariffs, respond to weather changes, and automate decisions to further reduce consumers' bills. Some claim to reduce energy bills by up to 75 percent.

For example, consider SolarEdge's battery controller. Distribution system operators can control it remotely. This can help improve grid stability and support integration with third-party electric vehicle chargers and heat pumps. It demonstrates the market's appetite for cross-platform or cross-supplier integration to reduce costs for consumers.

Ben Bowler, Technical Director

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Grid

When a client is interested in novating a connection offer from the contracted party to another, this often entails changing the associated redline boundary. The impact on the offer varies depending on whether it's at transmission or distribution level and the distribution network operator (DNO).

This practice will continue to be possible with the transmission network under the connections reform (see 'Spotlight'). It can be done until the party needs to submit Gate 2 evidence.

However, it is generally much harder to do this with a connection offer from a DNO. The DNO usually requires a new application for any connection offer where the development boundary is significantly changed. Therefore, the position in the queue will be lost. The specifics vary by DNO.

Eleanor Wratten, Associate

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Hydrogen

We are continuing to see interesting business models emerge around hydrogen production in certain industries. This includes heavy goods vehicles (HGVs) and aviation. Here, businesses are generating hydrogen to be used as an e-fuel or sustainable aviation fuel (SAF). In one case, they are using renewables to generate the hydrogen and combining it with captured CO2 for this purpose.

The Southwest is becoming something of a hub for clean fuels. Last year, the first green hydrogen plant in the West of England opened in Emersons Green. It's aimed at decarbonising sectors such as aviation, shipping, and heavy-duty transport. With the introduction of minimum requirements for blending SAF with conventional fuels, there could be a big market for this.

Tom Shilton, Director

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AND THE EMERSONS GREEN PLANT →

"This is the first time I recall the government mentioning geothermal in such a high-profile speech"

Geothermal

In April, Energy Secretary Ed Miliband spoke about geothermal energy. He made this important reference at an international energy security summit in London. It was significant because this is the first time I recall the government mentioning geothermal in such a high-profile speech.

Citing examples of common ground with regards to energy between the US and the UK, he said 'If you take the issue of geothermal, for example—a potential source of power—it's also an area where they have an interest in these issues.' This quickly followed the same point about nuclear. He suggested that both are an 'essential part of the energy mix' and an area for cooperation.

Mark Griffiths, Associate

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"Canadians have a lot to be proud of when it comes to nuclear"

Nuclear

Following on from my introduction, the Canadians have a lot to be proud of when it comes to nuclear. They have successfully refurbished and extended the life of their domestic CANDU GW-scale reactors, pioneered the production of isotopes for the global medical sector, and have a significant uranium mining sector. Canada was also recently the first G7 nation to grant a construction license for a small modular reactor.

Canada's nuclear regulatory system is much like the UK's. It has similar ambitions for nuclear new build and deep geological repository construction. It's great to see our two countries forging closer ties in this sector. Collaboration at all levels of government and industry is now key. We must share lessons learned and drive the nuclear renaissance together. A focus on strong policy direction and 'deliverability' is crucial to success.

Peter Sibley, Director

WHO ARE THE CANADIAN NUCLEAR ASSOCIATION? →

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