DENTONS

On the Horizon

GB Energy Market, 2024/25

Introduction

On 12 February 2025, our UK Projects team gave a breakfast seminar providing an overview of recent and forthcoming developments in UK energy law and policy.

Six months after the new Labour government came to power, the event offered insights into a picture of change and continuity across the GB energy landscape, including a new overarching policy narrative, structural and institutional changes, and the development of an increasingly large range of business models (aka subsidies) across the sector.

This report summarises those insights to provide a high-level outlook on the year ahead.

Energy infrastructure development remains central to two key missions under Keir Starmer's government, with the ambition of achieving "Clean Power" by 2030. Challenges abound, but as we step into 2025, there is a sense of renewed optimism and momentum in the sector.

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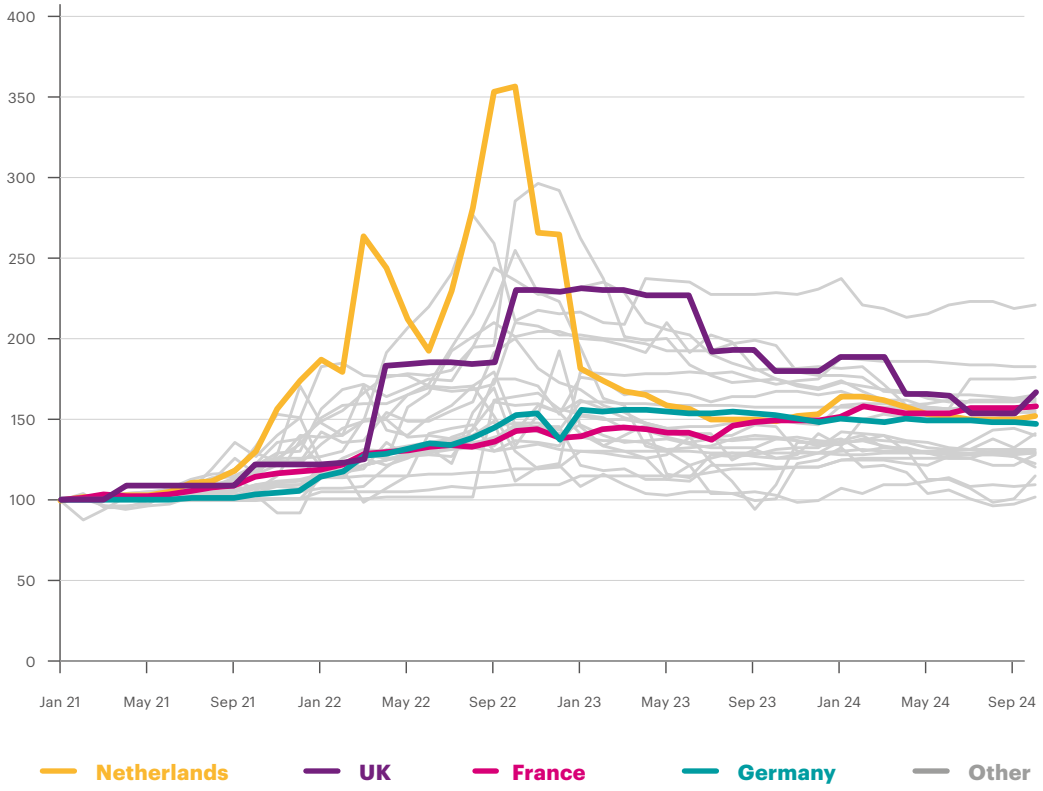
The big picture outlook

Starting with the political and economic perspective, the wholesale cost of electricity in Great Britain has risen significantly over the past five years, with increased volatility making the market more unpredictable. While some European nations have managed to bring prices back down following the 2022 crisis, the UK continues to face challenges in stabilising costs.

UK domestic energy prices increased faster than in many other European countries in 2022, and fell later in 2023.

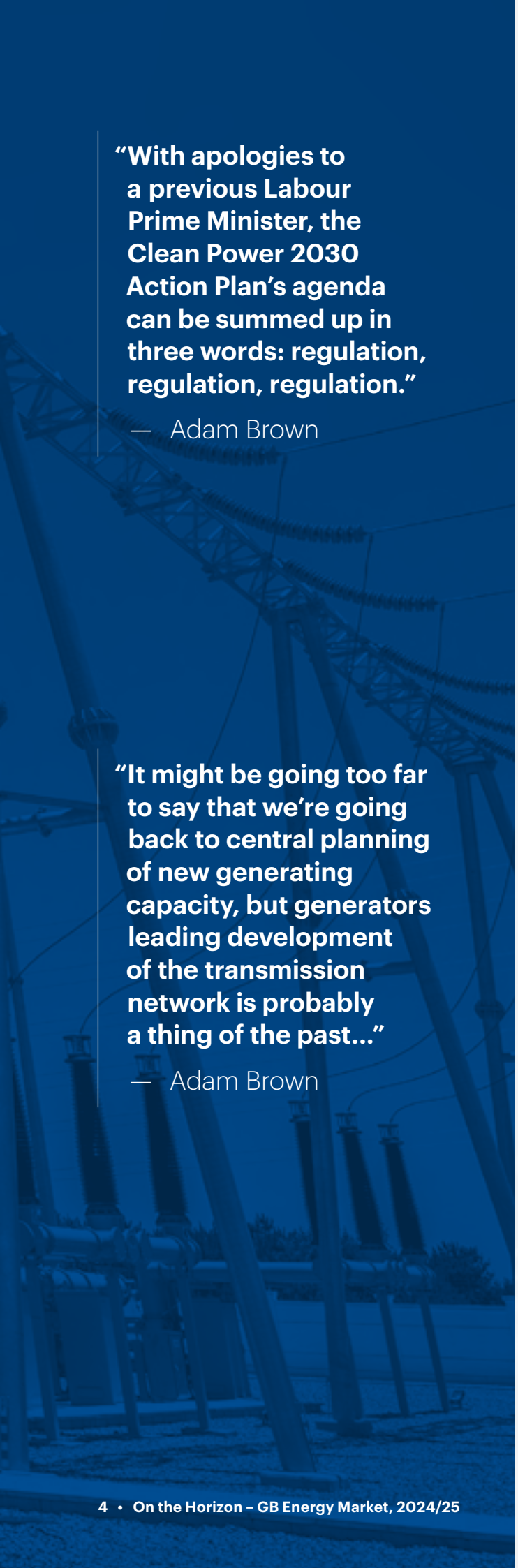
Index of CPI values for 'Electricity, gas and other fuels', OECD Europe countries. **Jan 21 = 100**.



Source: House of Commons Library Briefing, *Domestic Energy Prices*, 10 December 2024.

This pressing issue underscores the urgent need for investment in new energy infrastructure. Multiple estimates suggest that the UK must invest tens of billions of pounds annually to meet climate policy targets while ensuring a secure and affordable energy supply.

How can international capital be mobilised to meet climate goals and deliver value for UK consumers? The UK is focusing on attracting private investment by optimising its regulatory framework – emphasising stability and predictability as key advantages in the global market.



> **"With apologies to a previous Labour Prime Minister, the Clean Power 2030 Action Plan's agenda can be summed up in three words: regulation, regulation, regulation."**
>
> — Adam Brown

> **"It might be going too far to say that we're going back to central planning of new generating capacity, but generators leading development of the transmission network is probably a thing of the past..."**
>
> — Adam Brown

> **"The energy trilemma is alive and well, and the UK needs huge infrastructure investment."**
>
> — Mark Cheney

A new narrative

The obvious place to start when discussing the new government's energy agenda, its flagship Clean Power 2030 Action Plan (CP 2030), was published in December 2024. It replaces the previous government's less specific commitment to clean power by 2035 "subject to security of supply", with a more ambitious series of 2030 targets – backed by nearly 300 pages of analysis.

CP 2030 is focused squarely on electricity, acknowledging that while whole-economy decarbonisation remains the ultimate goal, the quickest path forward is to concentrate on what the UK already does well – building renewable generation at scale – but go much faster.

CP 2030 aims for at least 90GW of new capacity across the "big four" clean power technologies – onshore and offshore wind, solar and battery storage – while ruling out any net new unabated gas-fired generation (gas would produce no more than 5% of electricity generation in 2030).

This is not a plan that bets big on emerging technologies like CCS or new nuclear. Instead, it takes a pragmatic approach, setting national capacity targets that are broken down regionally, effectively influencing where and when projects can get connected. This shift suggests that the days of generators leading transmission network development may be over – **signalling a more coordinated, centrally managed vision for future UK energy infrastructure**.

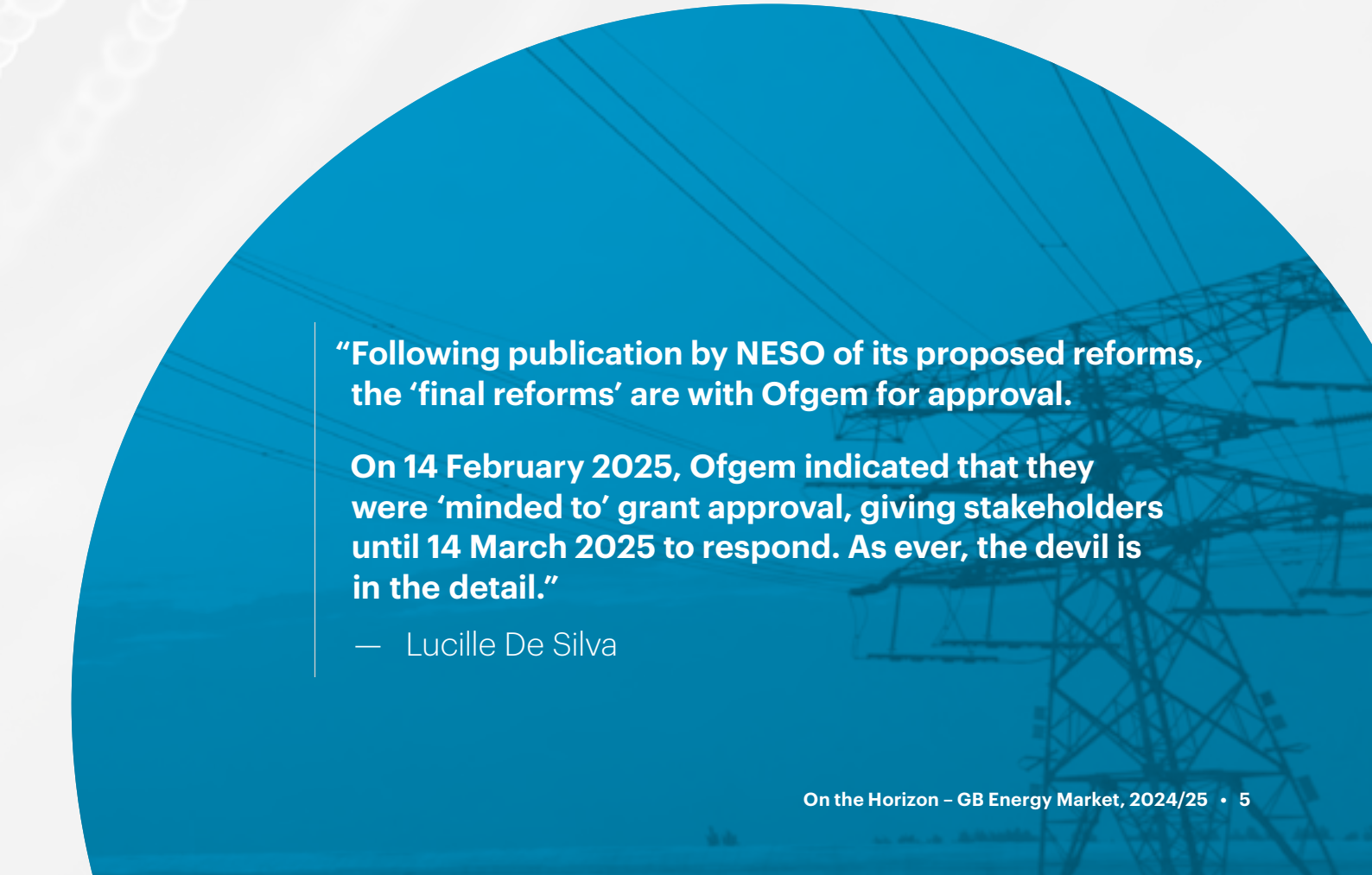
New rules for grid connections...

A Network Revolution is coming: grid reform in Great Britain has been ongoing for several years but is now accelerating. With the National Energy System Operator's (NESO) proposed reforms currently awaiting Ofgem's final approval, a significant overhaul of the grid connection process is expected in March 2025. That decision will determine whether all proposed changes are adopted (with or without modification). Implementation (in two phases, to 2030 and 2035) will begin later in 2025.

The new framework introduces stricter criteria for grid connection applications, including two set application windows per year and a tiered review process. Under the Gate 1 and Gate 2 system, projects must demonstrate land rights, planning approvals and strategic alignment with CP 2030 targets to secure a queue position. **Those failing to meet Gate 2 requirements may face delays or uncertainty, with their existing connection terms reassessed**.

If approved, the reforms will have far-reaching implications for generators, investors and power purchasers. **A critical outcome will be the reordering of projects in the grid queue based on their readiness and compatibility with CP 2030 "permitted capacities"**. The reform aims to facilitate connection of approximately 120GW of new capacity by 2030 – down from an estimated 170GW of projects that would count as "ready" and have connection dates before 2031 in the reformed connections queue. As a result, some such projects may not proceed, leading to potential stranded investments.

While some aspects of the reform introduce discretion for NESO and increased complexity in the system, projects with firm commitments – such as planning approval before December 2024 or government-backed contracts – are likely to remain secure. However, even for those that secure a pre-2031 grid connection date, the evolving market landscape post-2030 could present further challenges. In this rapidly changing regulatory environment, staying informed and proactive will be key to navigating the grid reform transition effectively.



"Following publication by NESO of its proposed reforms, the 'final reforms' are with Ofgem for approval.

On 14 February 2025, Ofgem indicated that they were 'minded to' grant approval, giving stakeholders until 14 March 2025 to respond. As ever, the devil is in the detail."

— Lucille De Silva

> **"We now know that nodal pricing has been discounted from the discussion, as has splitting the market by characteristic, such as having a separate market for renewables – but three major things remain on the table: wholesale market reform, CfD reform and capacity market reform."**
>
> — Carolyn Burns

...and wholesale markets

The Review of Electricity Market Arrangements (REMA) has steadily refined its reform options since its April 2022 launch, with consultations in 2022 and 2024. The autumn 2024 update confirmed a focus on reforms for a renewables-dominated system which will shape long-term arrangements for CP 2030 projects and others. Changes to renewables Contracts for Difference (CfDs), the Capacity Market and the structure of the wholesale market all remain under consideration. Key decisions will be timed to align with CfD Allocation Round 7 (AR7) and full implementation is expected post-2030.

Wholesale market reform aims to improve locational signals for investment and operation, with two basic options under consideration – a **move to a zonal wholesale market** or a reform of the existing "national" market. Zonal pricing divides the network into zones with separate wholesale markets, but this could have negative impacts on liquidity, investor confidence and legacy contracts. Mitigations under consideration include financial transmission rights based on inter-zonal price differences and shielding consumers from the effects of zonal pricing to some extent. Reform of the existing national market would enhance locational investment signals through adjusted network and connection charges (and possibly introduce some changes to the balancing mechanism), but it lacks clear locational operational incentives.

Code managers/code governance reform

Industry codes like the Balancing and Settlement Code are central to energy market operations but have been criticised as slow and dominated by vested interests, hindering net zero progress. **Further to the Energy Act 2023, a programme of reform is under way**. Ofgem-licensed code managers will replace existing Code panels and administrators. These managers will be obliged to deliver against a new "strategic direction" for codes, issued by Ofgem. A Stakeholder Advisory Forum aims to preserve valuable expert input from industry without allowing it to delay or deflect decision-making unduly. Ofgem gains new powers to give directions about the central systems that support the codes and to make some code modifications directly. It also has transitional powers, including to consolidate codes.

"Codes: not much fun to read; not much fun to write either... But they're very important and play a central role in everything we are discussing here today."

— Charles Wood

NESO: combining familiar and new roles

NESO is known in legislation as the Independent System Operator and Planner (ISOP) and in older policy documents as the Future System Operator (FSO). It went live on 1 October 2024, when National Grid ESO (NG ESO) became publicly owned and was given new "system operator" and "system planner" licences under the Electricity Act 1989 and Gas Act 1986.

Designed to be the "brain" at the heart of an efficiently decarbonising GB energy sector, NESO has inherited all NG ESO's functions, plus longer-term planning and forecasting work from National Gas. Its other roles include (or will include) functions in relation to hydrogen and driving competition in relation to electricity networks – all undertaken with a "whole-system" focus. NESO's new formal role providing advice and analysis to Ministers has already been seen in its work supporting CP 2030.

"NESO was launched and classified as a public corporation to be seen as independent from actual or perceived conflicts."

— Carolyn Burns

National Wealth Fund (formerly UKIB)

The UK Infrastructure Bank officially became the National Wealth Fund (NWF) in October 2024. No legal changes have been made yet, although legislation on it is expected during 2025. It continues to operate as the same corporate entity with business as usual until legislation is introduced later in the year.

NWF currently targets five priority sectors:

- Clean energy (renewables, hydrogen, CCUS, heating, supply chain)
- Transport (EV/hydrogen infrastructure, ports, hydrogen vehicles)
- Waste (recycling infrastructure, decarbonising energy from waste)
- Water (security, nature-based solutions)
- Digital (fibre roll-out, 5G investment)

Its key objectives are tackling climate change (contributing to meeting the UK's 2050 net zero target) and supporting regional economic growth.

The NWF fund size is growing from £22 billion to £27.8 billion, with £5.8 billion allocated to green hydrogen, carbon capture, ports, gigafactories and green steel. Alongside the logistical, personnel and expertise needs of increased funding and investments in new technologies, NWF's key challenge will be to maintain "additionality" and ensure its investments crowd in private sector capital.

Great British Energy

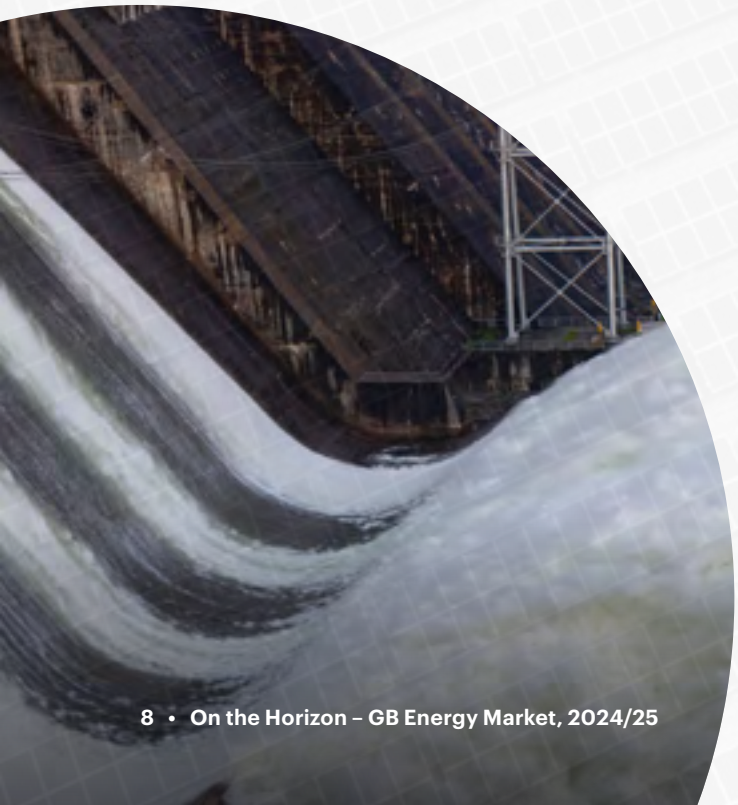
Great British Energy (GBE) is **a publicly owned clean energy company**, headquartered in Aberdeen, with the mission to **drive clean energy deployment to create jobs, boost energy independence and ensure UK taxpayers, billpayers and communities reap the benefits of clean, secure, home-grown energy**. Originally conceived as a retail energy supplier, its proposed role has since evolved.

GBE's key functions include investing in energy projects, leading project development, supporting local energy generation through the Local Power Plan, strengthening UK supply chains and collaborating with Great British Nuclear.

A Crown Estate partnership was announced in outline in July 2024 to accelerate **offshore wind development and supply chain investment**.

GBE is expected to work closely with the NWF on clean energy investments, leveraging NWF's experience and pipeline. As GBE scales up, there will be more clarity on how the two institutions will collaborate and complement each other.

The Great British Energy Bill is expected to complete its passage through Parliament in Q1 2025. It will put GBE's objectives, and the means by which government (including the devolved administrations as appropriate) will set its strategic priorities, on a statutory footing.



"NWF's investments are made around the principle of "crowding-in" private investment, whilst delivering on the Government's growth ambitions. NWF will also work in lockstep with GB Energy, with greater clarity awaited on how they will collaborate and complement each other."

— Torquil Law

Business models – sectors and subsidies

Contracts for Difference

CfDs provide revenue certainty for generators by guaranteeing a fixed strike price per unit of electricity generated. When the specified "market reference price" (MRP) is below the strike price, generators are paid the difference; when the MRP exceeds the strike price, they must pay the difference to the CfD counterparty.

Strike prices are set by competitive auction (allocation rounds). Allocation Round 6 (AR6) introduced technical updates to the CfD standard terms, including changes to the KYC process and amendments to CfD Agreements. It also made generators directly supplying to offshore oil and gas facilities ineligible for CfDs.

AR7, launching this year, will be aimed at the same technologies as AR6 but introduce new features. Onshore wind repowering projects would now be allowed to apply for CfDs, phased CfDs will be permitted for floating offshore wind and a Clean Industry Bonus will support sustainable production and local supply chains. Future allocation rounds will consider support for multi-purpose interconnectors, the definition of floating offshore wind and revisions to indexation.

REMA is exploring substantial reform to CfDs, addressing increasing negative price periods and limited incentives on generators to behave in ways that are optimal from a system perspective.

The two main alternative CfD models explored in the second REMA consultation (March 2024) are the "deemed" CfD and "capacity-based" CfD. Both of these models are based around de-linking CfD payment from an asset's output in an attempt to address some of these challenges.

The deemed CfD would base payments on estimated potential output to discourage generation during negative price periods, while the capacity-based CfD would provide fixed payments tied to installed capacity. Such major CfD reforms, if adopted, would not take effect before Allocation Round 9.

> **"REMA will likely bring about significant change to the existing CfD framework as it seeks to tackle negative price periods, improve generator incentives for system value through location and optimisation, and align output with actual system demand."**
>
> — Angela Cheng

> **"Under AR7, the Clean Industry Bonus will be introduced for offshore projects, which will impose minimum sustainability standards and offer enhanced revenue support for developers who choose to integrate more sustainable production processes and local supply chains."**
>
> — Angela Cheng

"Contracts for new technologies will involve milestones and commissioning targets for developers during the construction phase. It will be interesting to observe how these progress – especially where there are some construction risks and potentially other unexpected events."

— Claudia Thomas

"Where new levy funding is planned, this can be complicated to roll out and can be a potential pressure point in the coming years...if costs bite on consumers, it may attract consumer pushback and political attention."

— Claudia Thomas

Sons and daughters of CfDs

The UK has introduced various business models for new low-carbon technologies, inspired by the renewables CfD, providing revenue certainty for developers. These often quite complex arrangements aim to attract investment and de-risk projects. The government toolkit in this area also includes grants, guarantees and potential investment from the National Wealth Fund.

These contracts are typically long-term (10-15 years) and allocate construction risk to developers. Most include a strike price covering investment needs. Payments to the recipient of support, funded by government or a levy on industry parties, bridge the gap between this and an evolving reference price when the latter is lower; the recipient of support pays the difference when the reference price exceeds the strike price. In emerging markets like low carbon hydrogen with no ready-made benchmark index, the reference price is based on the achieved sales price.

Key schemes include:

- The Low Carbon Hydrogen Agreement
- Two carbon capture contracts: the Dispatchable Power Agreement for electricity generators using CCS and Industrial Carbon Capture contracts for industrial emitters. These are advanced models, with initial contracts signed and more expected this year.
- Bespoke CfDs, used for unique projects like Hinkley Point C, are individually negotiated rather than being awarded on standard terms to winners in a competitive process.
- For Greenhouse Gas Removal technologies, which generate revenue through carbon market allowances, indicative heads of terms are published, with further details on allocation expected this year.
- Sustainable Aviation Fuel revenue support contracts, aimed at encouraging UK production facilities, are less developed but legislative progress is anticipated this year with contract development to follow.

Flexibility and back-up

Supply-side

CP 2030 aims to reduce gas generation to 5%, **instead relying as far as possible on flexible low-carbon sources like batteries, long-duration storage and interconnectors to help keep the lights on when predominantly intermittent renewables are not generating**. Investment is expected to be driven by new subsidy schemes, including a cap and floor regime for pumped hydro, a probably more CfD-based business model for hydrogen to power and potential subsidies for some unabated large biomass plant before a transition to biomass with CCS.

Batteries, central to grid flexibility, face both opportunities and challenges. Connection reform could impact their deployment and zonal pricing under REMA might provide new opportunities. Environmental permitting requirements will impose costs but could help reassure planning authorities about the technology, smoothing the path to planning consents.

Capacity Market rule changes recently proposed or made aim to be more friendly to batteries and projects with very long lead times. For reducing reliance on unabated gas, the approach remains uncertain. Strategies under consideration include enabling decarbonising gas plants to exit the Capacity Market and potentially introducing separate Capacity Market clearing prices for different technologies. REMA's final proposals will influence the sector's long-term transition.

Demand-side

The question of whether demand-side response will finally take off in Great Britain has surfaced repeatedly over the past 12 years. **The CP 2030 target ranges suggest optimism that smart technologies like electric vehicles, intelligent appliances and flexible energy usage will gain traction, but regulation is likely to play a crucial role in accelerating adoption**. The Energy Act 2023 has made strategic regulatory moves to encourage the uptake of energy-smart appliances with responses to consultations on Energy Smart Appliances and Load Control Licences expected.

Market-wide Half Hourly Settlement should be a foundational enabler of many of the consumer-focused demand-side response technologies and is approaching its migration phase in September 2025.

The forthcoming Low Carbon Flexibility Roadmap (expected in summer 2025) aims to integrate these and other regulatory strands, promising reforms that will enhance consumer flexibility, such as removing final consumption levies on domestic and vehicle-to-grid (V2G) batteries.

Some final thoughts

The session provided a high-level discussion on key regulatory and policy developments in the GB energy sector.

Specific topics were selected for their relevance and the overall coherence of the session. However, that meant completely ignoring some important developments (see below) and skating over others, such as the Strategic Spatial Energy Plan, in a few seconds.

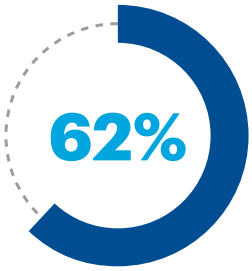
Looking ahead, several key areas were identified as likely to evolve over the next 12 months, including:

- UK-EU energy relations – outstanding questions remain, particularly concerning interconnectors.
- Regulatory alignment with the EU – the extent to which the UK will mirror EU policies in areas such as the Carbon Border Adjustment Mechanism (CBAM) and Green Taxonomy.
- UK's Seventh Carbon Budget & Industrial Strategy – expected policy decisions that will shape future climate and energy strategies.
- Government decisions on funding and regulation – particularly for previously unregulated sectors like heat, as well as tenders for familiar asset classes like Offshore Transmission Owners (OFTOs).
- Broader energy sector impacts – including intersections with transport and related infrastructure projects.

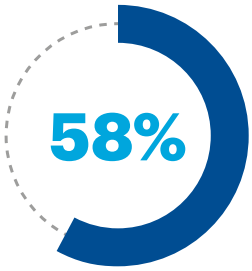
Poll questions

Q: Which of the following categories of UK-based projects do you expect to develop / acquire / lend to in the next three years?

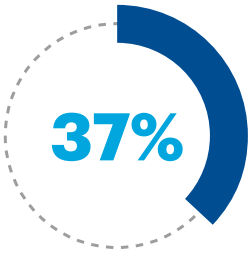
You said:



1. Battery storage



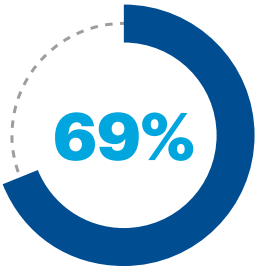
2. Established/mass-market renewable power (Solar PV, onshore wind, fixed bottom offshore wind)



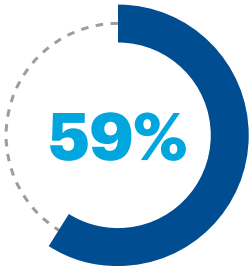
3. CCUS

Q: Which of the following topics would you most like to hear us discuss in more depth over the next 12 months?

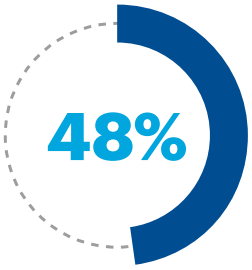
You said:



1. REMA/energy market reform



2. Storage and flexible power generation



3. Grid transformation

It was a pleasure to speak with you and our team would love to continue the conversation. If you have any questions or would like to discuss any of the topics further, please do not hesitate to reach out.

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