

Divergence Watch



ENERGY &
RENEWABLES



'I am pleased to present to you Ibec Global's fourth edition of Divergence Watch, our quarterly publication which looks at the shifting relationship between the EU and the UK to help business leaders navigate the cost and complexity of doing international business. In this issue, we focus on EU and UK divergence and cooperation in the area of energy. Following our December publication focussing on the role of carbon pricing and carbon emissions, this edition of Divergence Watch will look at EU and UK policy developments regarding renewable energy and electricity market design. These twin proposals are being expedited with a view to ensuring consumers - both industrial and private citizens - can benefit from lower prices and more sustainable energy sources, while also achieving 2050 net-zero ambitions. The ambition on both sides will not only set the trajectory for the respective economies but also play a decisive role in future EU-UK relations. With the rapprochement between the EU and UK following the agreement on the Windsor Framework, there may now be sufficient political space to provide for more cooperation on these essential areas of electricity market design and renewable energy integration.'

Jackie King, Executive Director, Ibec Global



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EUROPEAN UNION - ENERGY

Fit-for-55

In July 2021, the European Commission published the Fit-for-55 policy package, a comprehensive collection of both new policies and revisions to existing legislation that sets the EU on the pathway to reducing carbon emissions by 55% by 2030 and achieving carbon neutrality by 2050. The Fit-for-55 package encompasses a broad suite of legislative initiatives impacting all parts of the economy and affects the entire value chain, but perhaps most directly the energy sector.

To align energy policy with the ambitions set out in the EU Green Deal and Climate Law, the Fit-for-55 package mandates a significant increase in the uptake of renewable energy.

Setting the legislative framework that makes this possible, the Commission proposed a revision of the 2018 Renewable Energy Directive (RED II)¹. This Directive establishes a common framework for the recognition, production and promotion of energy from renewable sources in the EU, and has been updated to increase the overall ambition of the EU to reach a target of 40% renewable energy by 2030. The primary technologies which the Commission is aiming to promote include wind, solar, hydrogen and to a lesser extent biomass.

RePowerEU

While the uptake of renewable energy has been a climate imperative during this Commission's mandate, since the onset of the war in Ukraine, and the weaponisation of Russian

¹ https://eur-lex.europa.eu/resource.html?uri=cellar:dbb7eb9c-e575-11eb-a1a5-01aa75ed71a1.0001.02/DOC_1&format=PDF

fossil fuels, the European Union has come to appreciate another aspect of the move to renewable energy: energy independence. In reaction to the war, the EU has adopted the 'RePowerEU' plan, under which targets for the deployment of renewables have increased and permitting rules, a major delaying factor towards greater renewable energy roll-out, have been addressed.

In total, under RePowerEU, renewable energy generation capacities are currently set at 1236 GW by 2030. This includes 320 GW of solar photovoltaic that should be newly installed by 2025, increasing to 600 GW by 2030. Should these 2030 targets be met, solar would be the EU's single largest renewable energy source by the end of this decade. The deployment of offshore wind energy is likewise at the core of delivering on the EU decarbonisation targets. In order to achieve its ambitions, the European Union also adopted an offshore wind strategy under which 60GW of offshore wind by 2030 and 300GW by 2050.

The combination of these two forms of variable renewable energy would mean smaller bills and smaller environmental impacts for all consumers - businesses and private individuals alike. However, the rapid deployment of wind and solar power needed is currently hampered by local planning and permitting delays. As a result, under RePowerEU, the EU has proposed a wholesale reform to the planning and permitting process².

In the short term, the Council has adopted a regulation which would allow renewable projects like wind and solar to avoid some of the more onerous environmental impact assessments³. This would apply for the calendar year of 2023, with a view to extending the regulation thereafter if needed. On a more long-term horizon, however, these rules will be integrated within the Renewable Energy Directive and will include the designation of 'renewables go-to areas', in which they are exempted from certain environmental impact assessment requirements.

If the European Union can deliver on its ambitions of 1236 GW of renewable energy by 2030, and many multiples of that by 2050, the EU will have more energy than our current economy can consume. This is at the core of the business proposition of a (green) 'hydrogen economy', wherein the excess power produced by renewable energy installations would be used to produce hydrogen for applications such as natural gas and coal displacement in energy-intensive industries, energy storage, and transport.

With ongoing concerns in Europe regarding the impacts that short-term energy prices are having on the international perception of the bloc as a 'good place to do business', the promise of an abundance of renewable energy - both in the form of electricity and hydrogen - makes the bloc a possible location for a future green industrial hub.

The 2023 Renewable Energy Directive (RED III) is currently being finalised between the 'Trilogue' negotiators - the Commission, Council, and Parliament - with a view to adopting a finalised proposal in the coming months. Once the legislation is enacted in Brussels, this will fire the starting gun on a two-year transposition deadline for Member States to set out a roadmap of how the increased ambitions can be achieved.

Electricity Market Reform

While the promise of abundant renewable energy bodes well for a cheap, green hub for industry at present, in the short-term, Europe is battling an energy supply crisis as a result of its dependencies on third countries for the delivery of important energy carriers, such as natural gas.



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² <https://www.consilium.europa.eu/en/press/press-releases/2022/12/19/repower-eu-council-agrees-on-accelerated-permitting-rules-for-renewables/>

³ <https://data.consilium.europa.eu/doc/document/ST-16238-2022-INIT/en/pdf>

This has spill-over effects on the real economy, given the relationship between supply, demand and price, and has led policymakers in Brussels to look at reforming the EU's electricity market to 'decouple' the price of natural gas and electricity.

Electricity market reform is set to become one of the most hotly debated topics in Brussels and throughout Europe this year. The reform could have major implications for European businesses through either increased or decreased electricity bills depending on how well the reform is designed. The reform could also have implications for long-term renewable energy targets should the revisions fail to incentivise renewable development sufficiently through market pricing.

Discussions on the reform of the market began in earnest in mid-2021, with certain Member States voicing concerns regarding the

spiralling cost of electricity on the market as a result of the price of gas. The initial position of the Commission had been that there is no need for a reform of the wholesale electricity market, as it already protects consumers through efficiency gains, and that the ongoing electricity price crisis was the result of a supply shortage of natural gas.

However, many Member States (particularly the Iberian Peninsula) rejected this position, and have since been lobbying for structural market reforms. A central point from a political perspective is the scale of electricity trading which is conducted in the short-term markets (day-ahead) and the reliance on the 'pay-as-clear' model or 'merit order pricing' in these markets. This pricing mechanism links the price of the most expensive energy commodity (often gas) to that of lower-cost technologies such as wind and solar. The rationale is

that 'clearing price' will incentivise market efficiency, with high-priced commodities like gas making only small profits, while low-cost generation methodologies like wind and solar make significant profits.

To address this issue in the short term, the Commission enacted a regulation setting a price cap on 'inframarginal generators' (like wind and solar) of €180 per MW/hr. The excess from the price cap can then be used by Member States for either direct payment to consumers, or to invest in renewable rollouts, energy efficiency improvements, or other policies aimed at alleviating pressure on consumers. Member States, however, were also given scope to add technology-specific price caps and taxes in their respective countries, creating a patchwork of regulatory approaches across the bloc, and leading to significant uncertainty for investors.

In light of the ongoing energy security and thus price crisis, the Commission is now looking at more structural reforms to better protect consumers from excessive price volatility, to support their access to secure energy from clean sources, and to make the market more resilient. Principally, the Commission is aiming to:



Make electricity bills less dependent on short-term fossil fuel prices and boost the deployment of renewables.



Enhance consumer protection and empowerment.



Improve market functioning to ensure security of supply, and fully utilise alternatives to gas, such as storage and demand response.



Improve market transparency, surveillance and integrity.





European electricity markets could undergo some of the most significant reforms since the introduction of the Clean Energy Package in 2018 and the beginning of market liberalisation through the first energy package in 1996

In light of these reforms, European electricity markets could undergo some of the most significant reforms since the introduction of the Clean Energy Package in 2018 and will possibly undergo the most transformation since the beginning of market liberalisation through the first energy package in 1996.

Part of this shift would see some degree of a move away from the short-term markets and towards electricity purchased on long-term contracts. Renewable Power Purchase Agreements (PPAs) which involve a direct contractual relationship between a renewable energy provider and an energy consumer, as well as Contracts for Difference (CfDs), whereby a long-term price is agreed upon between a generator and consumer, with a financial contract supporting the agreement which would shield the consumer from price fluctuations.

The proposal of the EU's electricity price cap and broader reform of the market, however, is already having significant implications for renewable energy developers given the level of uncertainty it introduces into their investment models. Some of Europe's leading renewable energy developers are now instead focussing on development in the US market, given the new tax credits announced by the Biden administration through the Inflation Reduction Act.

The European Commission closed a public consultation on the wholesale electricity market reform on 13 February and is aiming to publish a legislative proposal on 14 March 2022. Whether the EU can deliver on its energy decarbonisation objectives, while also protecting EU businesses and consumers from volatile prices, will depend on how well these reforms are designed.





UNITED KINGDOM - ENERGY

The UK's decarbonisation programme has accelerated significantly over the last decade, but this sharpening of focus has little to do with Brexit. Indeed, the think-tank UK in a Changing Europe has found that the vast majority of UK/EU divergence in the energy sector has been driven by advances in EU regulation, rather than a great leap forward by the bloc's newly independent island neighbour.

While a record amount of UK energy was generated from renewable sources in 2022 – researchers at Imperial College London found that 40.2 percent of electricity was made up of solar, wind, biomass and hydropower last year – the UK remains reliant on imported fuel, and gas in particular.

It took Russia's invasion of Ukraine just over 12 months ago to spark a long overdue analysis of which renewable energy technologies should be prioritised by UK policymakers to meet two overarching objectives: reducing the UK's dependence on mainland Europe for much of its energy supply, and kickstarting

a revolution in domestic energy efficiency. Having arguably fallen behind in the race for renewable innovation, the UK is now determined to turbo charge its investment in green technologies.

British Energy Security Strategy: a new blueprint

This new approach was set out in the British Energy Security Strategy of April 2022. In his foreword to the document, then-Prime Minister Boris Johnson spoke of a need to “exploit the potential of all renewable technologies” and set a headline target that 95% of all electricity generation should be derived from renewable sources by 2030.

Specifically, the Strategy upped the ante on offshore wind and the deployment of green hydrogen, while an eye-catching pledge to build eight nuclear reactors by the end of the decade was characterised as a decision to “reverse decades of myopia”. The independent Climate Change Committee responded that, “for perhaps the first time, the Government has made commitments that clearly go beyond CCC proposals in key low-carbon technologies”. The Strategy was broadly welcomed as a reasonably ambitious roadmap towards

substantially increasing investment in renewable technologies.

However, it met with disappointment among stakeholders, including business leaders, who felt measures on energy efficiency and the decarbonisation of heat were all but ignored. Heat pumps have been “in vogue” among UK policymakers in recent years and were held up in some quarters as a catch-all solution to off-grid decarbonisation. Their installation will be zero VAT rated until 2026, and it is projected that 600,000 will be installed every year until 2028. Critics claim this will barely scratch the surface of what is required to deliver a “retrofit revolution”. It certainly does not compare favourably with the EU Renovation Wave, through which the bloc intends to double the rate at which existing housing stock is retrofitted.

Two prime ministers later, the Energy Bill

Responsibility for implementing the Strategy ultimately lies with Rishi Sunak after Johnson was deposed last summer and his successor, Liz Truss, was dramatically forced from office inside 50 days. It is worth reflecting that Sunak, a Stanford

graduate, is a fervent believer in the potential of technology and innovation to solve complex policy challenges. He notably used his time as Chancellor of the Exchequer to introduce tax incentives to boost R&D spending. His team is known to be receptive to the introduction of positive financial incentives to turbocharge investment in, and the production of, green technologies.

Turbulence at Westminster caused the resulting Energy

Security Bill to be placed on hold last summer, before undergoing a thorough Whitehall review. It re-emerged in December 2022 as the Energy Bill, which is currently making its way through the House of Lords. The Bill is due to enter report stage soon, with a date to be announced before it heads to the House of Commons for what is likely to be a lengthy period of scrutiny by MPs. The Government is hoping to see the Bill through to completion by the time Parliament rises for recess in July 2023.

How will the UK Energy Bill deliver investment in renewable technologies?

The Energy Bill is the Government's flagship legislative vehicle for driving the development of "a cleaner, more affordable and more secure energy system for the long-term". Its current iteration would introduce 26 separate measures structured around three key pillars, one of which is "leveraging investment in clean technologies". The Government claims it will drive £100 billion of private sector investment by 2030.

How will the UK Energy Bill deliver investment in renewable technologies?

- ➔ **Green hydrogen – the Government will support industry to undertake two trials designed to investigate the use of hydrogen for heating. The intention is to provide evidence to inform strategic decision-making on the future role of low carbon hydrogen in heat decarbonisation from 2026 onwards.**
- ➔ **Carbon capture usage and storage (CCUS) – the Bill will hand the Secretary of State powers to provide capital investment for CO2 transport and storage networks, and establish an economic regulation model led by Ofgem. However, Ofgem is thought to have limited capacity to take on any further regulatory powers.**
- ➔ **Green hydrogen and CCUS business models – the Bill will introduce "state-of-the-art" business models to support an ambition for up to 10GW of low carbon hydrogen production capacity by 2030, and to capture and store**
- ➔ **20-30MtCO₂ per year by the end of the decade. It will provide long-term financial assistance to support the establishment of CCUS and low carbon hydrogen production, encouraging investors to scale up deployment. The Industrial Carbon Capture (ICC) business model will incentivise the deployment of technology in industries that are hard to decarbonise.**
- ➔ **Low Carbon Heat Scheme – a new scheme will support businesses to invest in emerging supply chains, including for low emissions vehicles and renewable electricity generation. It will also place an obligation on manufacturers of fossil fuel heating appliances to meet a rising standard for low carbon heat pump sales as a proportion of their total sales. The intention is to lower the cost of electric heat pumps through economies of scale and innovation.**
- ➔ **Heat network zoning – the Bill introduces a regulatory framework for district heating. Ofgem will be tasked with granting licences to heat network developers, as is the case with other utilities.**
- ➔ **Fusion power – the UK is widely recognised as a world leader in fast-evolving fusion technologies. This Bill will remove the requirement for those developing fusion power to secure nuclear site licences - a clear point of divergence from EU regulation.**
- ➔ **Nuclear – the Bill will enhance the UK's nuclear third-party liability regime in another clear point of divergence. The previous commitment to build eight new reactors by 2030 has been dropped, despite a majority of UK voters backing nuclear.**

Review of Energy Market Arrangements (REMA)

The Bill also ties in closely with the Review of Energy Market Arrangements, the most significant overhaul of the energy market in a generation. Like other aspects of the Bill, its progress has been stifled by political uncertainty, but the Government is now pressing ahead with measures to decouple global wholesale gas prices from UK wholesale electricity prices. An independent Future System Operator, with responsibilities in both the electricity and gas systems, will be set up to ensure efficient energy planning and promote innovation.

Obstacles to the development of innovative batteries and pumped hydro storage will be removed. As mentioned, there will be a focus on kick-starting the development of heat networks across England. And critically, the Contracts for Difference (CfD) auction scheme for low carbon electricity generators will be overhauled.

Focus on Implementation

Four months into his tenure, the Prime Minister Rishi Sunak has taken decisive action by creating a brand-new Whitehall department specifically designed

to deliver on the UK's net zero ambitions. The Department for Energy Security and Net Zero – tentatively known as 'DESNZ' – has a mandate to secure the UK's energy supply, encourage greater energy efficiency, and perhaps most pertinently, to "seize the opportunities of net zero to lead the world in new green industries".

Passing the Energy Bill is one of six stated DESNZ priorities for 2023. The Department will also focus on expediting the development of network infrastructure, while REMA – previously spearheaded by the defunct Department for Business, Energy and Industrial Strategy – will also fall within DESNZ's remit.

UK Future Direction of Travel

The UK Government is due to publish a series of strategies and consultation responses in the coming months that will inform further policymaking. The low carbon fuels strategy was due to be published by the end of 2022 but has yet to materialise. We are also awaiting publication of the biomass strategy, which will build on the Biomass Policy Statement published in November 2021.

In the spring, DESNZ will respond to the Chris Skidmore MP's report Mission Zero: independent review of net zero. The review, commissioned by Liz Truss to map out a "pro-growth, pro-business" pathway to decarbonisation, made a series of punchy recommendations including the development of a 'net zero technology roadmap'. This would identify the key decision points that must be made to ensure priority technologies deliver on the UK's net zero and growth ambitions, and assess the R&D required to enable them. Skidmore argued that this would give far greater confidence to innovators and investors. It will be interesting to see which, if any, of his proposals are adopted.

Time is of the essence if Rishi Sunak's Government is to make significant progress on the net zero agenda. A general election must be held within the next two years and an Autumn 2024 election is most likely. Once an election is called, policy decisions with major spending implications will be put on hold. 2023 will therefore be a crucial year for UK investment in green technologies.



CONCLUSION

Divergence or Convergence?

Following an acrimonious and prolonged divorce negotiation, on 1 January 2021, the UK left the EU's internal energy market. In the years since, the UK has been largely excluded from EU energy market planning, and the UK electricity market has also been 'decoupled' from that of the EU.

However, given the scale of interconnection between the EU and UK electricity and energy markets,

divergence has been impractical, and will lead to inefficiencies in each market. From day-to-day issues like ensuring electricity moves from where it is cheap to where it is more expensive (market coupling), to generational infrastructure projects like the 'North Sea Grid', the recently agreed Windsor Framework may give the political space necessary to ensure that the EU and UK can jointly plan a future energy and electricity market based on renewable resources that delivers value for consumers and businesses.

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