OEUK OFFSHORE ENERGIES UK

ECONOMIC REPORT 2025

Unlocking our energy future


FIDRA

ECONOMIC REPORT 2025

An integrating offshore energy industry which safely provides cleaner fuel, power and products for everyone in the UK.

Working together, we are a driving force of the UK's energy security and net zero ambitions. Our innovative companies, people and communities add value to the UK economy.

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Contents

Cover photograph:

Immingham Port, UK.
Crucial for the UK's oil and gas industry due to its strategic location, deep-water access, and ability to handle large volumes of both liquid and dry bulk cargo.

Inside cover photograph:

Aberdeen Harbour during the 2025 'Tall Ships Races'.
An international sailing event where tall ships from around the world compete and showcase their vessels during Europe's largest free family event.

FOREWORD

Dave Whitehouse,
Chief Executive Officer
Offshore Energies UK

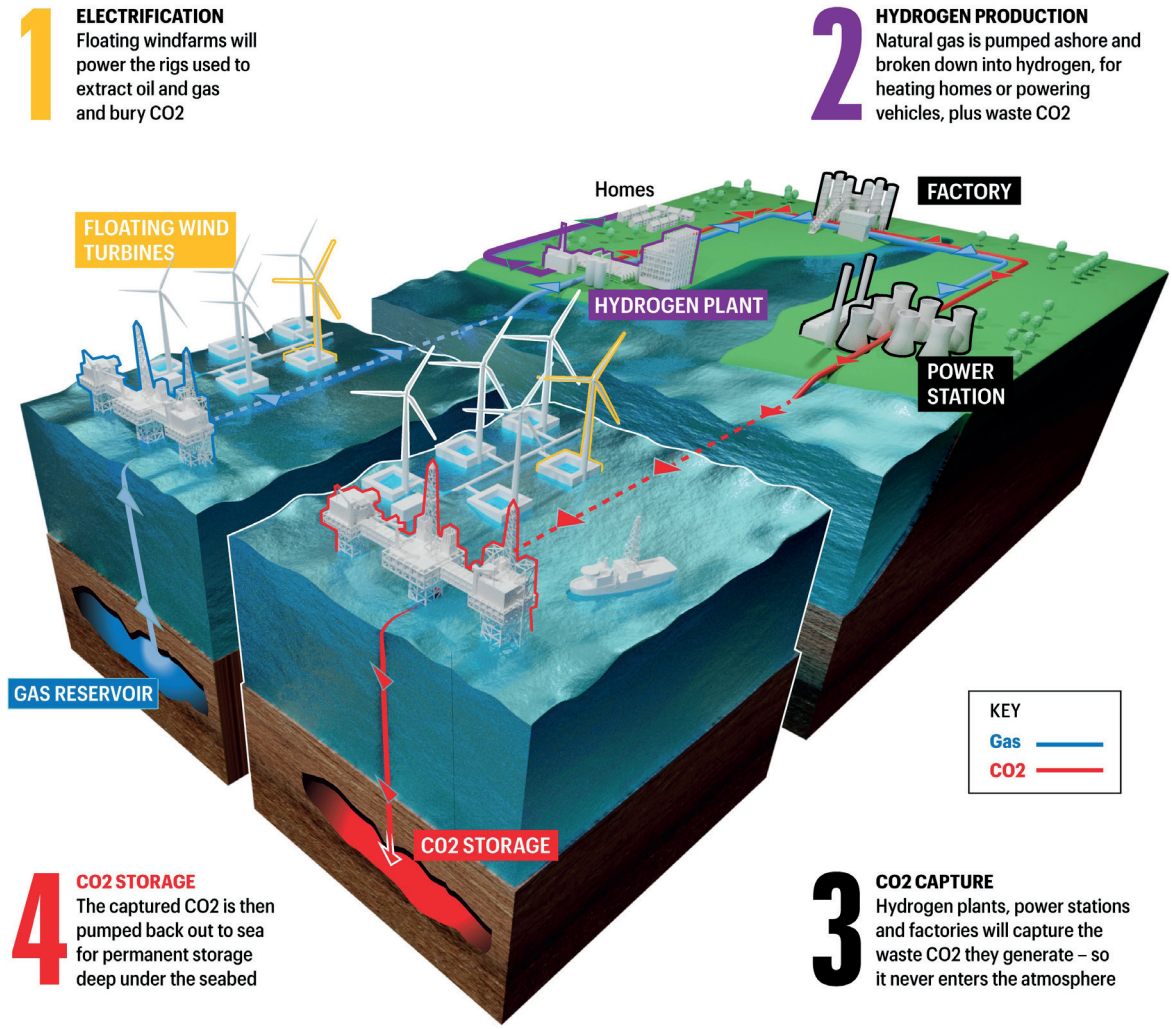
OEUK's 2025 Economic Report is published at a time of profound change, where geopolitical tensions, fiscal uncertainty, and climate imperatives converge. The past 12 months have seen a significant transformation in energy economics worldwide. Despite record investment in renewables, global energy demand for all energy sources continues to grow, leading to a further relentless rise in emissions, underscoring the scale of the challenge ahead.

The UK, which has an energy history inextricably linked with its industrial and economic evolution, embodies both the challenges and opportunities of this era. In the 1930s, it created the first integrated national electric power grid in the world, predominantly based on coal-fired power stations. In the 1960s, it unlocked the potential of North Sea gas, creating a pioneering offshore oil and gas sector. It is now leading the world in the deployment of offshore wind with clear and clean power 2030 targets, redeveloping the electricity transmission grid to do so. As we see, the UK has consistently been at the forefront of energy innovation. Today, our integrated offshore energy sector - spanning oil, gas, wind, hydrogen, and carbon storage - is a strategic national asset. It supports 154,000 direct and indirect jobs, contributes more than £25 billion annually to the economy, and underpins our industrial capability.

Few national assets have delivered such consistent value to a country for over half a century. Yet North Sea energy has powered UK economic growth since the 1970s and could do so for decades to come - but only if we continue to nurture it. Our Economic Report 2025 shows how policymakers have the power, responsibility and tools to unlock investment to maintain the North Sea as a foundational economic asset.

A stable, investment-friendly environment could unlock billions in private capital, reduce reliance on imports, and reinforce UK global leadership in offshore energy. Without growth in the sector, our energy import gap will continue to rise. OEUK currently projects the energy import gap to remain above 40% for much of this decade, further exposing the UK to global volatility and undermining domestic energy security.

Offshore Energies UK is the only trade association to represent oil and gas, hydrogen, CCUS and offshore wind in the North Sea.



This report sets out the challenges and opportunities ahead. It calls for pragmatic action to underpin delivery through continued licensing to meet domestic demand, an expansive CfD Allocation Round 7 that accelerates the build-out of offshore wind capacity, reform of the Energy Profits Levy to restore investor confidence and economic value, and a credible long-term energy strategy that supports industrial growth and net zero. The decisions made this year will shape our energy future and wider economy for decades to come.

Let's choose a homegrown energy future - one that delivers secure, affordable, and lower-carbon energy for the UK.

SECTION 1:

EXECUTIVE SUMMARY

- **The global demand for energy continues to rise; last year, we witnessed 2.2% growth, a rate exceeding the average of the preceding decade.** As anticipated, emerging economies are the primary contributors to last year's global energy demand growth. Such countries need to continue to balance the deployment of energy at pace and scale with climate commitments.
- **In 2024, global annual CO_2 emissions increased by 0.8% to an all-time high of 37.8 billion tonnes of CO_2 per year.** This surge corresponded to record atmospheric CO_2 levels of 422.5 parts per million, 50% higher than pre-industrial levels and edging closer towards a 2 degree increase in global temperatures.
- **Global GDP growth continues to exceed growth in demand for energy and energy efficiency is improving.** However, global instability driven by the prolonged conflict in Ukraine, heightening tensions in the Middle East and protectionist trade policies, such as those imposed by the United States, threaten further improvements.
- **The UK continues to demonstrate a steady decline in overall energy consumption.** This has been underpinned by a trend of deindustrialisation over the past 25 years, with much of the UK's manufacturing capabilities moving overseas, deepening domestic trade deficits while offshoring emissions. For example, the UK's chemical manufacturing industry shrank by approximately a third between 2021 and 2024.
- **OEUK expects the UK's energy import gap to remain around 40% for most of this decade, unless we act now.** There is potential for the UK's energy import gap to fall by 2030, but only if we cultivate a stable and secure climate for investment. Importing over 40% of our energy has long-term implications for our energy security, exposing the nation to the ramifications of ongoing geopolitical conflicts.
- **The UK has had a long history of global leadership in energy development:** from being the first nation to industrialise in the 18th century, to inventing the steam turbine in 1884, through to driving innovation in offshore oil and gas production and housing the world's largest offshore wind farm. The UK has consistently been at the forefront of energy innovation, central to this is our world-class supply chain and workforce, which needs a steady flow of business to survive and thrive.

- **The offshore energy sector as an employer is at a turning point;** failure to achieve our basin goals (well-managed decline of oil and gas production, accelerated growth in renewables and harnessing carbon storage potential) could risk workforce contraction of up to 20%. Achieving these targets, however, could see our workforce grow by almost 40%.
- **Significant progress has been made over the past decade to expand the UK's low-carbon and renewables power capacity.** However, failure to deliver substantial Contract for Difference (CfD) awards for wind projects in both prior allocation rounds has placed pressure on the UK's ability to meet its Clean Power 2030 (CP30) targets. AR7 will need to deliver at least 8.4 GW and allocate a larger budget to floating wind to ensure the UK maintains a leadership position in this emerging sector.
- **A further rise in the announced Administrative Strike Prices (ASP) for AR7 will not have the desired effect of reducing wholesale energy prices by 2030 without policy intervention.** UK industries are struggling, and we need clear industrial price policy intervention to maintain our domestic capabilities.
- **The UK's Carbon Capture and Storage (CCS) sector is poised for rapid growth, with Track 1 clusters reaching Financial Investment Decision (FID).** By 2030, HyNet and the East Coast Cluster are set to remove 8.5 million tonnes of CO_2 a year, the equivalent of taking 4.5 million cars off the road. Track 2 clusters, Acorn in Northeast Scotland and Viking in Humberside, received development funding in the Spending Review and are expected to reach FID by the end of this Parliament.
- **This summer's commitments to reform national pricing, as part of the Review of Electricity Market Arrangement (REMA), will bring stability that can renew investor confidence and build a nationwide network secured by a diverse mix of domestic energy** - from oil and gas, to offshore wind and emerging sources, including hydrogen. Retaining national pricing supports offshore wind and clean energy development in Scotland and across the UK.
- **Immediate action is paramount to reinvigorating the UK's offshore energy system, the fiscal and regulatory barriers to investment in oil and gas need addressing.** Due to challenges posed by fiscal instability and increasingly tight regulations, even projects with financial backing are no longer guaranteed development – slowing offshore energy advancement. Removal of the EPL and replacement with an appropriate price mechanism could attract investment in more than 2 billion boe of resources across the UK Continental Shelf (UKCS).
- **The EPL has not delivered the expected tax revenue, with less than 40% of the forecast 2022 tax revenue now expected to be achieved in the period from 2023 to 2028.** The downward pressure from expanding US and OPEC+ supplies of oil and gas have brought into question the continued role of the oil and gas price mechanism. The 6 month rolling average oil price have sat below the Energy Security Investment Mechanism (ESIM) threshold price of $76.12/bbl since April this year.
- **Current projections indicate the UKCS is on track to only supply a quarter of the UK's oil and gas demand out to 2050, despite having the potential to produce half of the demand.** The geology has not changed; policy and regulations have hampered the UKCS's ability to deliver on its potential. Domestic production has a lower carbon footprint than imports, creates and supports British jobs and generates value for the economy.

SECTION 2:

GLOBAL ENERGY DEMAND AND TRANSITION TRENDS

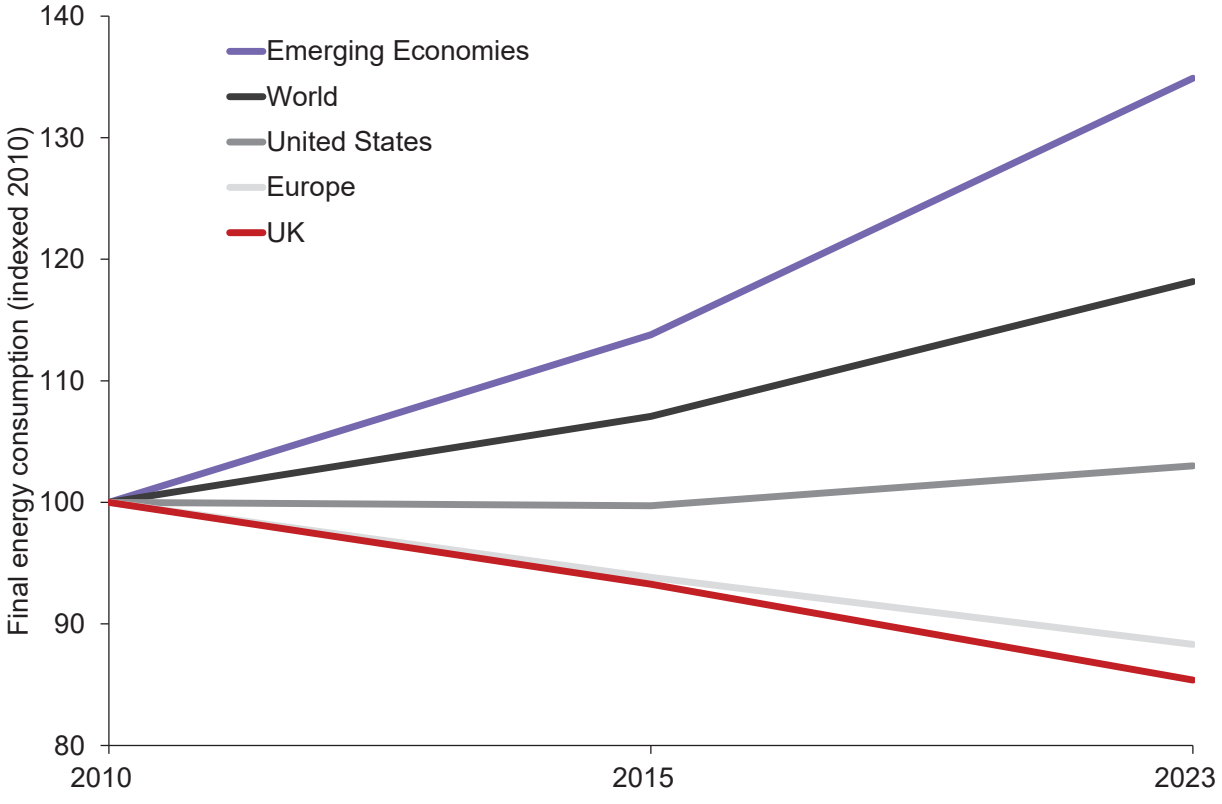
2

Global Energy Trends

Global demand for energy continues to rise; last year, we witnessed growth of 2.2%, a rate faster than the average for the past 10 years. As anticipated, emerging economies are the primary contributors to last year's global energy demand growth, as they balance the deployment of energy at pace and scale with climate commitments.

Figure 1

Global energy growth is accelerating, driven by emerging economies.



Source: IEA, DESNZ

Turning East, China and India showed significant energy growth, collectively accounting for an increase that surpassed the combined demand growth of all advanced economies. China is progressing towards being the world's first major "Electrostate", with its share of energy coming from electricity exceeding 30%, well above the European and North American average. Not only does this include the value of production, clean-energy sectors also contributed $1.6tn to the Chinese economy, almost one-tenth of the value of the economy.

The overall surge in energy demand was spearheaded by electricity demand, increasing alone by 4.3%. Most of this growth was in advanced economies, whereby rising energy needs are closely tied to the rapid pace of digitalisation and accelerating power demands of artificial intelligence (AI). Since 2015, the electricity consumed by AI model training has doubled every 1.4 years and these spikes in AI usage are testing grid networks that also feed housing and businesses.

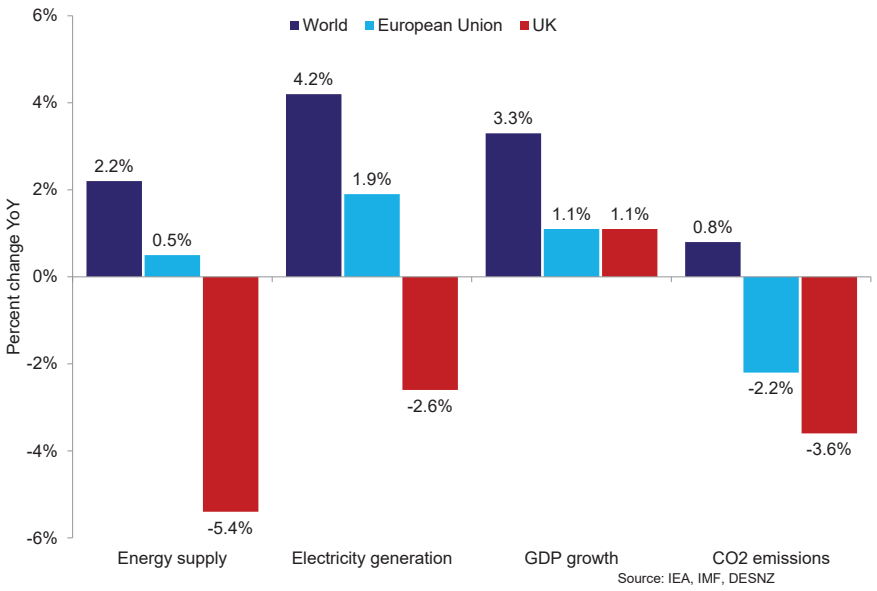
A defining feature of the global energy landscape throughout the 2020s is the sustained growth seen across all energy sources. Last year, there was simultaneous growth in oil, gas, coal and renewables - this represented a "both and", not an "either or" approach. Fossil fuel consumption continues to rise, while the acceleration in the deployment of renewables has slowed global emission growth. Similar trends have emerged in other advanced economies, such as the Netherlands and New Zealand, to revisit their approach to oil and gas phase-out, citing rising energy prices and increased risks of energy shortages.

In advanced economies, low-carbon energy sources and renewables have seen huge growth. However, global trends lead towards growth in fossil fuels for electricity generation. The contrast between advanced and emerging economies highlights the complexity of the energy transition and the challenges we face in balancing global decarbonisation with the widespread distribution of electricity. In this evolving energy landscape, collaboration between government, industry and policymakers will be critical.

Data centres as pictured in the The Netherlands are driving up electricity consumption due to the growth of AI and cloud services.

Figure 2

Global energy performance 2023 vs 2024 - World, EU & UK.



With global energy demand rising, so too have energy-related CO_2 emissions. Last year, annual global CO_2 emissions increased by 0.8%, to an all-time high of 37.8 billion tonnes of CO_2. This surge in global emissions coincided with record atmospheric CO_2 levels, 422.5 parts per million, 50% higher than pre-industrial levels and edging the world closer towards a 2 degree increase in global temperatures: from fires in LA, Australia and Southern Europe, to the increasing frequency of flooding, the effects of climate change are becoming far more apparent.

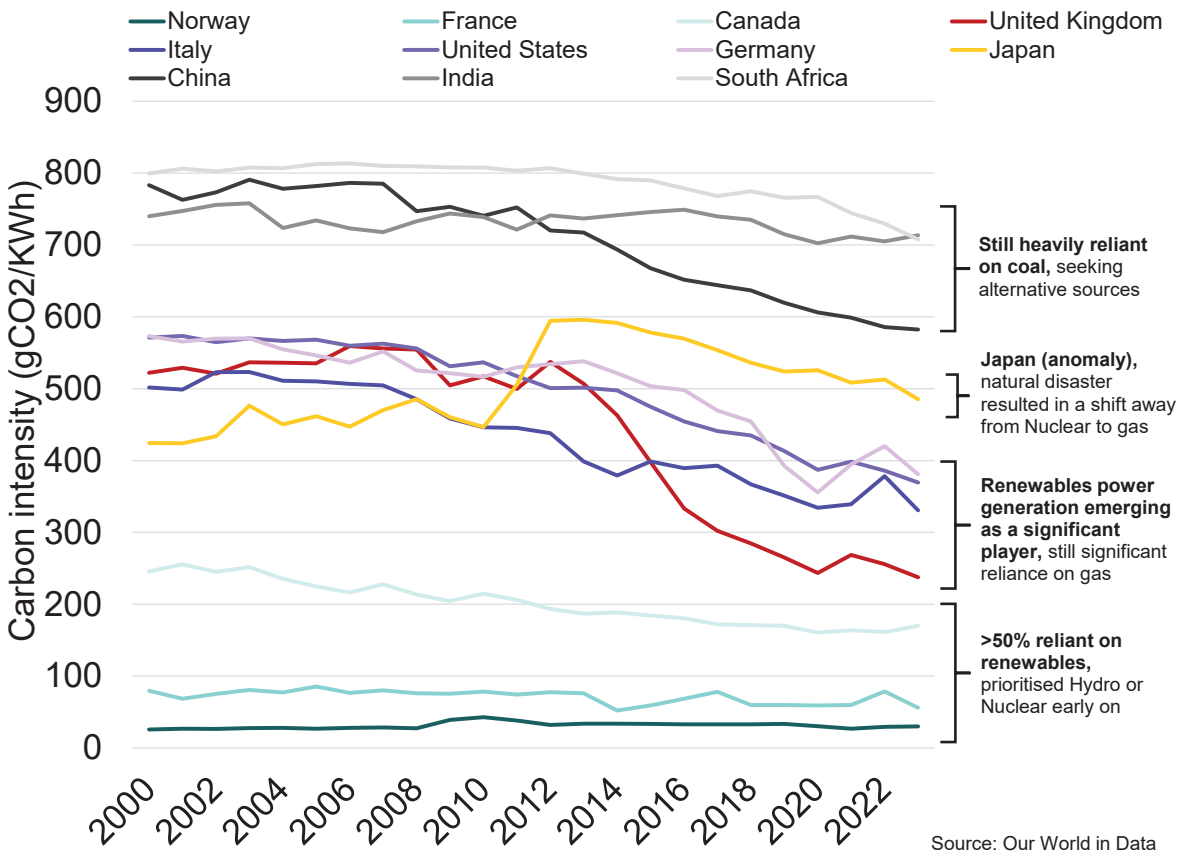
Last year's growth in emissions was led by natural gas and coal capacity growth; natural gas emissions alone added 180 million tonnes of CO_2 (+2.5% YoY growth), making it the single largest contributor to global carbon emissions growth. Driving this growth in consumption were China, the United States, the Middle East and India. A shift in approach to gas consumption in the United States, following the election of President Trump, along with rising energy demand in China and India, will mean that this trend is unlikely to change in 2025.

Despite this backdrop, some nations have achieved significant emissions reductions through energy efficiency, renewables deployment and de-industrialisation. The UK, for instance, has been at the forefront of emissions reduction. In 2008, it became the first country to establish a long-term, legally binding framework to cut emissions, later strengthening its ambition to be net-zero by 2050. Since 1990, the UK has reduced territorial emissions by 50.4% and has ambitions to reach a 68% reduction by 2030. Last year alone, territorial emissions in the UK fell 3.6%, achieving the significant milestone of phasing out coal, the primary energy source during our first major energy transition in the 18th and 19th centuries. 2024 also marked the first year that wind power generation surpassed natural gas as the top contributor to the UK's electricity supply mix, an important milestone in the nation's transition towards a cleaner energy future.

The carbon intensity of electricity generation continues to vary widely across nations, contingent on their access to resources, economic development, and geographical factors. In Figure 3, we have identified three distinct approaches to electricity generation that have emerged globally: nations prioritising cheap electricity expansion, those transitioning to lower-carbon power systems, and early adopters of dispatchable low-carbon technologies.

Figure 3

The UK's carbon intensity of electricity generation is decarbonising at a faster rate than its peers.



Among its peers, the UK stands out for its strides in decarbonisation. The phased elimination of coal-fired power plants has paved the way for more efficient natural gas systems, offshore wind farm development, and with the announcements from the 2025 comprehensive spending review, an expansion of its nuclear capacity. These efforts have significantly lowered the carbon intensity of its electricity supply over the past 15 years.

Similarly, Norway and France have maintained their positions as leaders in low-carbon electricity generation. Norway's reliance on hydropower and France's extensive use of nuclear energy have not only ensured cleaner electricity but also resulted in some of the lowest electricity prices in Europe. These early investments in dispatchable, low-carbon energy sources highlight the importance of strategic planning in achieving both environmental and economic benefits.

Standing out in Figure 3 are the three nations selected in grey. For these nations, the power generation source of choice has been coal. Over the past 10 years, the additions of coal power generation capacity in India and China alone dwarfed the cutbacks made by Europe, Russia, Australia and the United States combined. Between them, India and China have added an average of 35 GW of coal power generation capacity a year since 2015. Nations such as South Africa are almost wholly reliant on coal for their electricity supply, prioritising the widespread deployment of electricity over decarbonisation efforts.

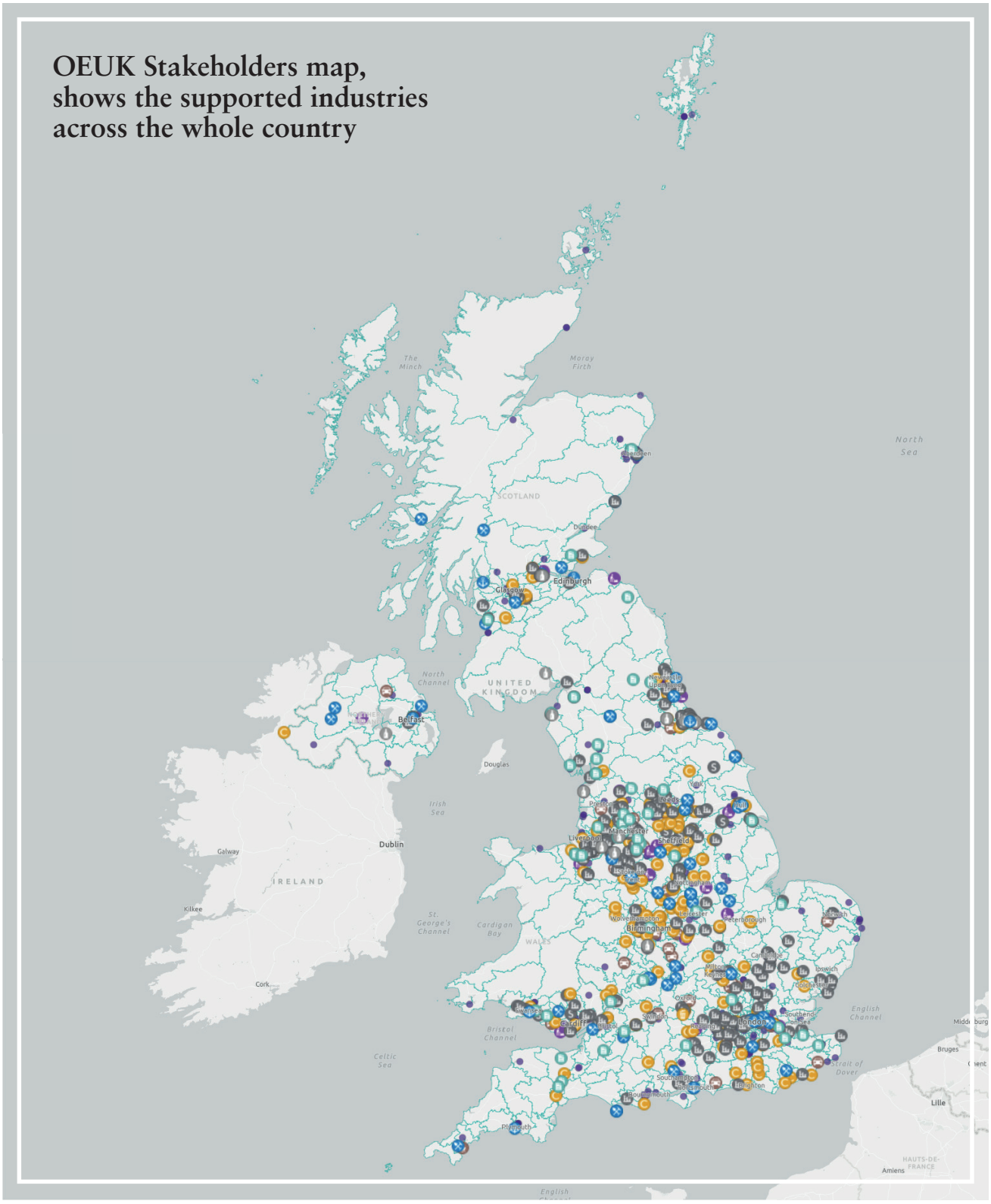
GDP Growth

Historically, global GDP growth and energy demand have been closely intertwined as greater economic output has typically garnered greater energy consumption. However, recent years have seen a notable decoupling of these trends. The shift of advanced economies towards service-oriented models and widespread electrification has led to greater energy efficiency, a trend exemplified by the UK's transformation since the early 2000s.

Over the past year, global GDP has risen by 3.2%, signalling growth in economic activity despite prevailing uncertainties. However, troubling signs of potential weakness in the global economy have surfaced, driven by geopolitical instability, including the prolonged conflict in Ukraine, heightening tensions in the Middle East and protectionist trade policies such as those imposed by the United States. These factors continue to weigh heavily on international trade and market dynamics.

While the UK's GDP growth, 1.1% in 2024, remains modest compared to the global average, its performance aligns closely with the EU's economic growth rate and marks a return to growth following a year of relative stagnation in 2023. To continue this trend of stable economic growth, the UK must leverage (all) its strengths, including its diverse offshore energy sectors and world-class supply chains. By delivering a robust industrial strategy and providing the right investment conditions, the government can generate economic growth while supporting the UK's foundational industries (of which the offshore energy sector is one) and promoting energy security.

The decisions made by policymakers over the next 12 months will be instrumental in determining the trajectory of the UK's economy, particularly the energy sector, which underpins the entire economy. These choices will influence energy security, jobs and dictate which regions will benefit most. With the right strategies, the UK can unlock opportunities for sustainable growth, generate value for the economy and pave the way for a cleaner, more equitable energy future.



Scan the QR code here to see an interative mapping tool that shows the numerous industries that are directly supported by the offshore energy industry, across the whole of the UK.

SECTION 3:

LEADERSHIP IN DECARBONISATION

3

The UK has historically been a global leader in energy development, from being the first nation to industrialise in the 18th century, to inventing the steam turbine in 1884, through to driving innovation in offshore oil and gas production and housing the world's largest offshore wind farm. That legacy continues as the UK cements its position as a global leader in decarbonisation, a position sustained by net zero emissions targets, transition-driven regulatory and policy positions, and a world-class offshore energy sector.

In 2019, the UK became the first major economy to legislate to reach net zero by 2050; this decision signalled to the world a clear national commitment to decarbonise. Signs of progress are already visible, as by 2022, the UK had reduced its territorial greenhouse gas emissions by 50% compared to 1990 levels, a first by a major economy. However, this is only part of the picture, our total carbon consumption has declined at a far slower rate.

While the UK represents less than 1% of total global carbon emissions, we must be able to show that decarbonising can be achieved without having a detrimental effect on the economy, while maintaining our industrial capacity. It is through leading as an example that the UK will be able to drive decarbonisation elsewhere, especially in a world where some of our close political counterparts are deprioritising climate responsibilities.

Our energy sector has been at the forefront of the UK's decarbonisation trend. In 2021, OEUK signed the North Sea Transition Deal on behalf of industry, a partnership between the UK government and the UK's offshore oil and gas sector. Included is a voluntary industry target of 50% local UK content across the lifecycle for all related new energy technology projects by 2030. This comes in addition to early reductions in offshore production emissions of 10% by 2025, 25% by 2027, and 50% by 2030, set against a 2018 baseline to meet the sector's aim of creating a net zero basin by 2050. Emissions from oil and gas assets have already reduced by 28% over the last 6 years, 18% more than the targeted rate of decline.

Today we have installed 16 GW of offshore wind capacity, championed by the world's largest offshore wind farm, Hornsea 2, capable of delivering green electricity to over 1.4 million homes every year. However, Hornsea 4, expected to have delivered 2.4 GW of capacity has been cancelled due to increased supply chain costs and higher execution risks. By 2030, the government has plans for 43-51 GW of installed offshore wind capacity, tripling our existing capacity.

Wind turbines under preparation to be sailed to the floating offshore wind farm, Hywind Scotland Pilot Park, near Peterhead, Scotland.

The Hywind Scotland wind farm, installed in 2017, was a world first. While only a modest 30 MW, it offers a glance at the opportunities unlocked by installing wind farms in deeper waters, significantly expanding the seabed available for wind developments. The Innovation and Targeted Oil & Gas (INTOG) leasing round for offshore wind projects in Scotland has been designed to help decarbonise the oil and gas sector by reducing the carbon impact of power generation offshore - currently the largest source of emissions associated with oil and gas production. OEUK members, Flotation Wind, are championing the development of floating offshore wind (FOW) through the 400 MW Green Volt project, leading the UK's charge to become a global hub for FOW innovation.

Beyond power generation, the UK is advancing critical decarbonisation infrastructure in Carbon Capture & Storage (CCS). Over the last 12 months, we have seen both the Track-1 CCS clusters, HyNet and East Coast Cluster, reach FID, capable of capturing and storing 8.5 million tonnes of CO_2 per year by 2030. This is the equivalent of removing 4.5 million cars from UK roads. Progress has also been made on our second wave of CCS clusters, Acorn CCS and Viking CCS, which are expected to reach FID before the end of this Parliament. For many hard-to-abate sectors, such as cement, there are simply no other ways to decarbonise, a view shared by the Climate Change Committee (CCC) in their 7th carbon budget guidance. Net-zero 2050 will not be possible without CCS and the UK is fast becoming a global leader in this sphere. With 78 Gigatonnes of CO_2 storage, the UK has the capacity to not only decarbonise domestic emissions but also support the decarbonisation of neighbouring nations through offering a secure place to store carbon dioxide.

The skills honed through 50 years of oil and gas production in the North Sea will be vital for the deployment of a large-scale CCS sector with ambitions to capture and store 50 million tonnes of CO_2 per year by 2035. OEUK and Rystad research indicate that over 80% of the capital expenditure required to deploy a large-scale CCS sector can be met by the existing capabilities of the supply chain servicing the oil and gas sector - reflecting the integrated nature of our offshore energy sector.

SECTION 4:

THE UK'S OFFSHORE ENERGY SECTOR, A STRATEGIC ASSET

4

Since the 1970s, the UK's offshore energy sector has been a vital strategic asset for the economy, providing jobs, generating tax revenues and underpinning the country's energy security. It has been a catalyst for innovation; in the 1970s, the UKCS pioneered subsea exploration, and in the 2010s – 2020s, it provided the foundation for the UK to become a global leader in offshore fixed-bottom and floating wind. In recent months, funding has been awarded for the next major step in innovation in UK waters through developing carbon storage potential and providing a means of decarbonisation for hard-to-abate sectors.

Energy Consumption and Production

Consumption & Imports

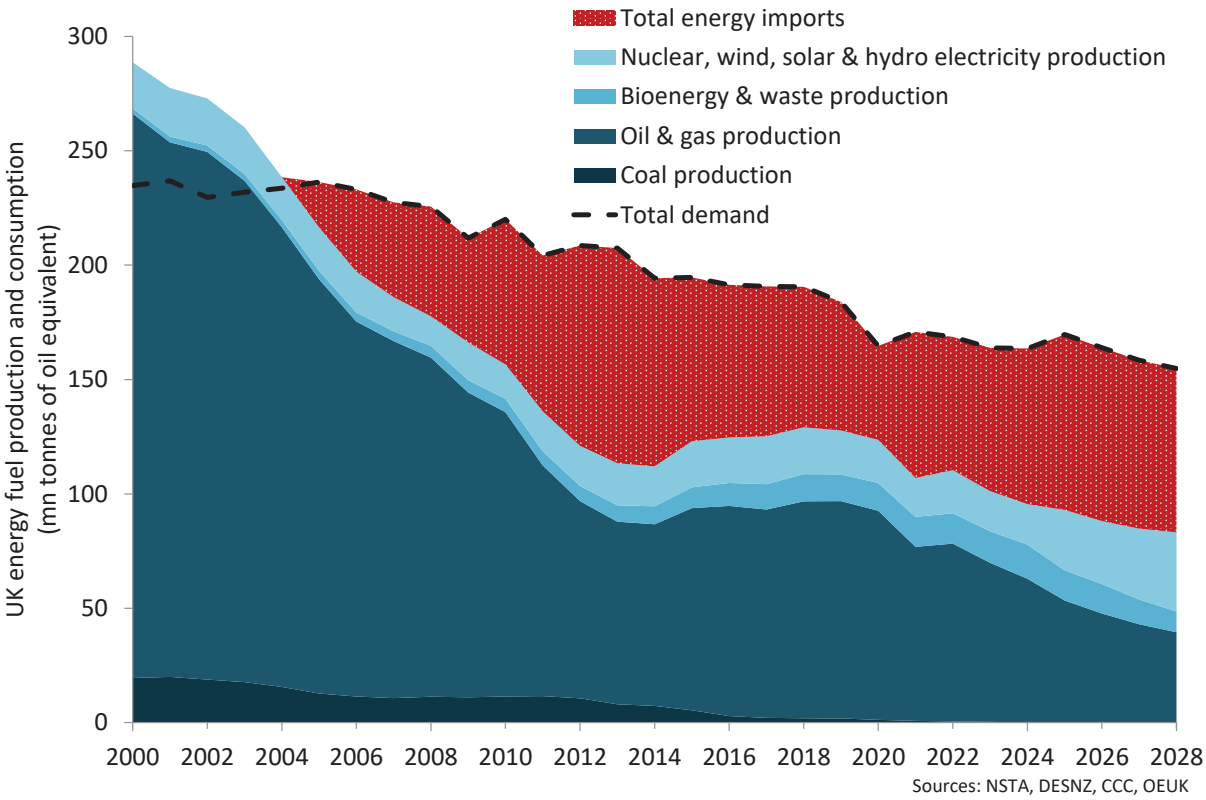
In contrast to the global norm, the UK continues to demonstrate a steady decline in overall energy consumption. This decline has been fuelled by a trend of deindustrialisation over the last 25 years, with much of the manufacturing capabilities moving overseas, deepening domestic trade deficits. Alongside this, the UK's world-leading commitment to electrification has seen huge improvements in energy efficiency. OEUK expects this trend to continue throughout the remainder of the decade as the nation progresses towards Clean Power 2030 (CP30).

The UK's reliance on energy imports has continued to grow in recent years, expanding to 42% in 2024. This has been driven by the long-term reduction in domestic fuel production, rather than changes in energy use. Production of primary energy in the UK has been steadily declining over the past quarter-century, reflecting the maturity of the UKCS as an oil and gas producing basin. Overall, primary energy production has decreased by two-thirds since 2000, while demand has fallen by just one-third.

OEUK expects the UK's energy import gap to remain around 40% for the next 4 years, only starting to decline in 2030. However, this projection is dependent on the successful scale up of the UK's renewable power generation capacity. Without it, Labour's long-term goal of energy independence will not be achievable, especially as total energy demand will have to continue to decline.

Figure 4

The UK is now reliant on imports for 43.8% of its energy consumption. Without sustained investment in domestic oil, gas and renewables, this gap will continue to grow.

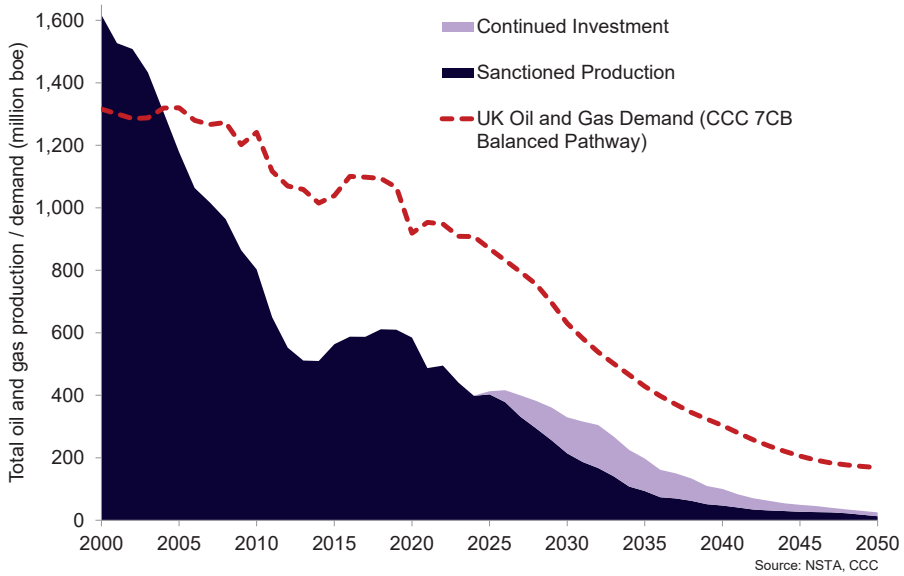


The UK has been a net importer of energy since 2004. For most of this period, the cost of energy has been relatively low, making imports affordable. However, the volatility experienced in energy markets over the past 5 years has meant that while the UK increased its reliance on imported oil, gas and electricity, the unit cost of these imports also rose. Between the period 2004-2021, the average real terms National Balancing Point (NBP) day-ahead price was 54p/therm, Brent crude $87/bbl and electricity £47.93 MWh. However, over the past 24 months, they have averaged 91p/therm, $80/bbl, £125/MWh.

While prices have declined in recent months, the UK continues to bear the costs of its increasing reliance on imported energy. In 2024, the net cost of energy imports in the UK was £20.9bn, or 0.6% of total GDP. Importing over 40% of our energy carries long-term implications for our energy security, leaving the nation exposed to geopolitical risks - including the sustained war in Ukraine and escalating tensions in the Middle East. While the UK does not directly import energy from Iran or Russia, their influence on the global energy markets has and will continue to impact the cost of energy in the UK.

Figure 5

Without sustained investment, the UK could see its reliance on imports rise to 70% of total oil and gas consumption by 2030.



Production

While production projections from the NSTA and government have declined over recent years, the geology has not. The subsurface still holds untapped potential - what is needed is a new perspective. In 2019, the NSTA projected that 6.5 billion boe could be recovered from the UK North Sea between 2025 and 2050. At the time, its strategic theme was maximising economic recovery from the basin, with a challenge for the sector to achieve 1.3 million boe/d in 2030. Since then, that projection has been revised down to 0.6 million boe/d in 2030, and 3.8 billion boe total recovery between 2025 and 2050.

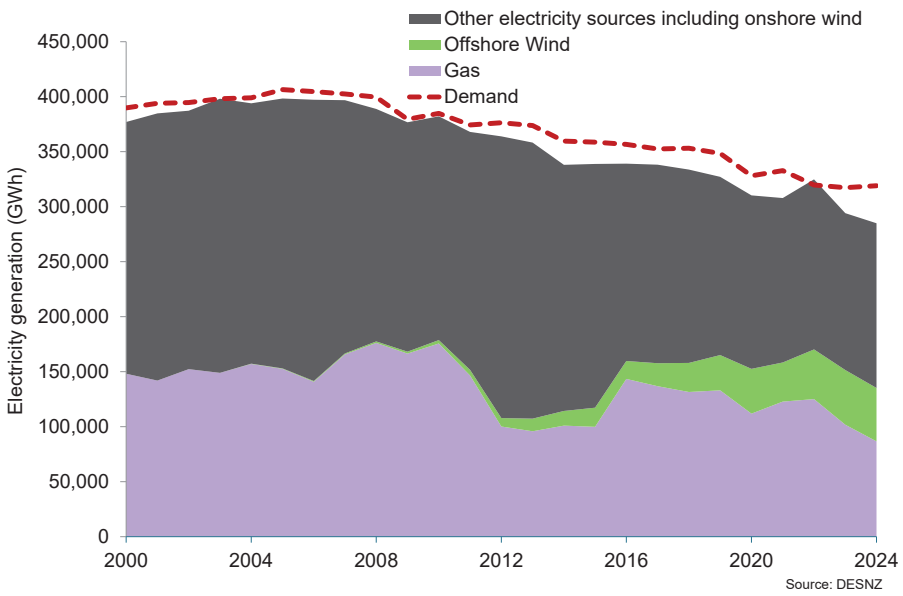
The opportunities identified in 2019 still exist today. While commodity price volatility has always been a challenge, it is the fiscal and political environment that has driven companies to defer or cancel both short and long-term investment plans. The downgrade from 2019 estimates reflects investor confidence, not a reassessment of the basin's geological potential. The UK North Sea is a mature basin in natural production decline, while the decline cannot be prevented, there is still a substantial prize available for both industry and the government, if the investment environment allows it.

Westwood Global Energy Group estimates, commissioned by OEUK, indicate that under the current regime, the UKCS could produce up to 4.3 billion boe. However, in an enabling market environment, including significant changes to tax, licensing and regulatory approvals and favourable commodity prices, the UK could unlock up to 7.5 billion boe. A seismic shift in investor sentiment would also be required to achieve this, built on:

- A stable and globally competitive fiscal policy
- Incentives to investment
- Clear long-term commitment to ongoing licensing
- Faster approvals process for new developments and licence awards
- Pragmatic, proportional, and achievable net zero regulations

Figure 6

The UKCS continues to play a significant role in meeting electricity demand



The UK's offshore energy sector has increasingly influenced electricity supply in recent years, accelerated by the build-out of the offshore wind sector in the UK over the last decade. Natural gas and offshore wind have, on average, been the top two producers of electricity, together fueling almost half of UK electricity demand. In an environment where electricity plays an ever-growing role in energy demand, the UK's offshore energy sector will continue to play a leading part in strengthening domestic energy security.

The declining influence of nuclear power generation over the past decade has meant that the UK, in line with total energy consumption, is becoming more reliant on electricity imports to meet the soon-to-be growing demand. Provisional estimates for 2024 indicate that the UK's net electricity imports exceeded 33 TWh (33,408 GWh), an all-time high, as a distinct gap is beginning to grow between indigenous production of electricity and total demand. Developing the UK's capacity to produce electricity both from renewables and natural gas, in the absence of a suitable alternative dispatchable power generation source, is imperative to strengthening energy security and preventing future volatility on consumer bills.

Employment and Economic Contribution

What are direct and indirect jobs?

Direct jobs are those which are created by businesses whose activities are primarily focused on energy production and specific supply chain activities.

Indirect jobs are supported by companies in the wider supply chain who rely on demand from energy production projects. They are not officially classed as energy production companies, but their goods and services are critical for the sector. Examples of these include logistics, construction, catering, and professional services.

Employment

Size of the Workforce

The UK's offshore energy sector has long been home to a world-class energy supply chain which together with operators and developers, supports 154,000 direct and indirect jobs. These roles contribute to over £25 billion annually in Gross Value Added (GVA) to the UK economy. Three-quarters of these jobs (115,000) are currently found in the oil and gas industry - the remainder are in the growing offshore renewables industry. With the current growth of renewables and the maturity of the UKCS as an oil and gas basin, we can expect to see the proportion of offshore energy sector jobs met by the expansion of the renewables industry to 60-67%.

Today, 1 in 30 jobs in Scotland and 1 in 220 in the UK are in our offshore energy sector.

According to Robert Gordon University's (RGU) Energy Transition Institute (ETI) 2025 report "Striking the Balance", substantial growth in employment within the sector is achievable, provided that the Clean Power 2030 targets are met, alongside the sustainable management of oil and gas production.

Risks to UK Supply Chains

Maintaining UK supply chains will be critical to the success of the energy transition. Mismanagement of the oil and gas sector would see an early exit of supply chain companies from the UK. Many of the capabilities we hold in our supply chain, currently supporting the oil and gas sector, will be required for the scale-up of our offshore low-carbon and renewables. However, the expansion of these supply chain organisations is dictated by the pace of real projects materialising. While the ambition is real, the reality for companies today is that the pace of activity increase remains slow. There is skepticism in the market, with some companies that moved early facing the harsh reality of having to downsize their teams now facing continued delay and uncertainty. To build investor confidence, the government must provide clear market signals supported by sector delivery plans, linking workforce demand modelling to the clean energy delivery plans.

Under the low-end scenario set out by the ETI, workforce demand within the offshore energy sector could shrink by as many as 29,000 jobs (-19% reduction compared to 2024 levels). Such a scenario sees the UK miss its 43-51 GW CP30 targets for offshore wind, oil and gas production fall to 500,000boe/d and just 10 million tonnes of CO_2 captured and stored per year by 2030. Unfortunately, this is the trajectory the UK is currently on. Our 2025 Wind Insight indicated that the UK was on track to achieve 36 GW of offshore wind capacity by 2030. Industry data signals oil and gas production falling between 450,000-600,000 boe/d by 2030, and with just two CCS clusters reaching FID thus far, we are set to store 8.5 million tonnes of CO_2 per year by the end of the decade.

This underscores the criticality of policy and regulatory decisions made this year, as they will define the future of the industry and its long-term economic contribution. We have a real opportunity to not only maintain but also grow the energy sector workforce. An economy that promotes investment across all energy vectors will see the greatest uplift in jobs and GVA. RGU's analysis indicates that achieving 50 GW of offshore wind, 30MtCO_2, 10 GW of Hydrogen, and a managed decline to 700,000 boe/d oil and gas production would result in workforce demand growth of 58,000 jobs (+38% growth compared to 2024 levels). To maximise our workforce, we must support the entire offshore energy sector.

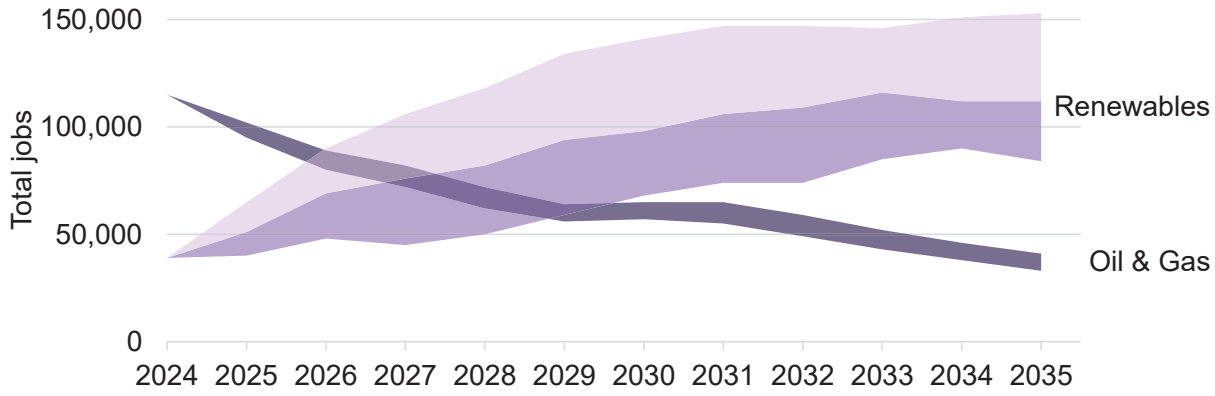
Supporting UK Supply Chains

There are a handful of support mechanisms owned by the government aiming to drive investments in UK supply chains. The first, the National Wealth Fund (NWF), is the UK's principal investor and policy bank, with a mandate to mobilise additional private capital in support of the UK's growth and clean energy missions. In supporting the supply chains of nascent industries, the NWF will mobilise private investment through performance guarantees. These performance guarantees protect lenders against potential losses, encouraging investment.

To further support the development of UK supply chains, we have seen Great British Energy (GBE) land a deal worth up to £1 billion to support the growth of the offshore wind supply chain, supporting jobs in industrial heartlands, such as Teesside, Scotland, South Wales and the East of England. While the NWF remains the UK's principal investor and policy bank, GBE will play a new role as a developer of energy projects. GBE's involvement in these projects will reduce risk and provide a strong signal to the supply chain and investors. The approach taken by the UK in having two distinct and complementary roles of developer and bank mirrors a common model seen across the world, including in Japan and Denmark.

Figure 7

Continued investment in our oil and gas sector, as well as renewables, will ensure that the supply chain remains in the UK for the energy transition.



Source: RGU ETI

Accompanied by the Clean Industry Bonus (CIB) in AR7, the scheme will provide greater revenue support to fixed-bottom and floating offshore wind projects that invest in new or existing domestic offshore wind supply chain infrastructure or cleaner manufacturing. It is estimated that for every £1 spent on the CIB, £17 will be secured in private investment, supporting the development of UK-based supply chains required to build floating and fixed offshore wind farms.

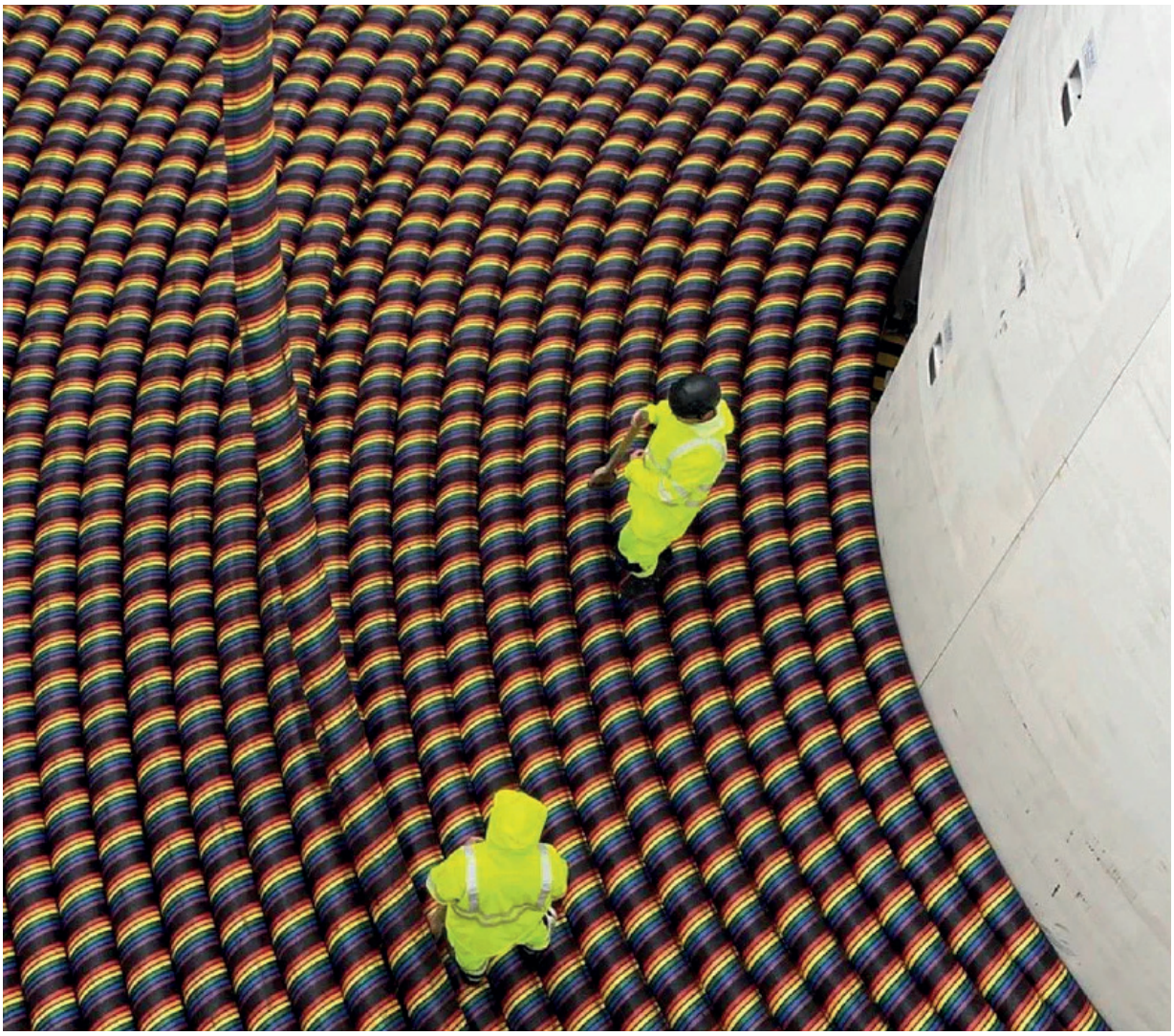
Economic Contribution

Since the first production of oil on the UKCS in the 1970s, the UK's offshore energy sector has played a pivotal role in the nation's economy. Over the past 25 years, the oil and gas sector has contributed to more than £175 billion in tax receipts (adjusted to 2024 values), with nearly £20 billion collected in the past three years alone. Despite declining fossil fuel production, the UK oil and gas industry continues to provide a substantial economic impact through billions of pounds in annual tax revenues and supporting thousands of jobs across the country. In parallel, the expansion of offshore renewable energy capacities, including offshore wind, CCS, and hydrogen storage, is poised to fill some of the void left by our maturing oil and gas basin.

The UK's offshore energy sector supply chain has long stood as a strategic asset, anchoring the nation's position as a leading force in global energy project development. Built upon decades of technological innovation and operational experience in oil and gas, and now increasingly in renewables, this supply chain has developed a reputation for excellence. British engineering firms, specialist manufacturers, and technology providers have benefited the UK's balance of trade by exporting goods ranging from subsea cables and wellbores to wind turbines and electrolysers to markets around the world. Equally important is the export of the UK's world-class workforce, engineers, technicians, project managers and

safety specialists, whose expertise is highly sought after globally. This enduring legacy of exporting goods, services and people underscores the UK supply chain's continuing role as a national asset, epitomising economic strength and international collaboration in the offshore energy sector.

A survey of OEUK member organisations earlier this year found that more than 50% of companies generate more than 60% of their revenue from UK business operations and that only 3% have no non-UK revenue generation. The data also showed that 90% of companies were aiming to increase their international business in the next 12-24 months. While this overseas work continues to bring in a significant value to the UK economy, shoring up supply chain businesses to offset the shortfall in activity, these companies need reassurance from Governments that they will work with our sector to create a competitive fiscal regime that increases investment in oil and gas projects. Without this, there is a very real risk that by next year, the UK will face a strategic exodus of critical supply chain capability as companies respond to the pull from busier countries with more supportive policies.



Cabling details from the 'Hornsea 2' wind project, the world's largest offshore windfarm.
Photo courtesy of Ørsted.

SECTION 5:

CHALLENGES IN ACHIEVING CLEAN POWER 2030 & NET ZERO AMBITIONS

5

Types of Power Sources:

Firm power – guaranteed, consistent level of power supply that is always available, even during adverse conditions. Example: nuclear.

Dispatchable – generation that can be turned on or off, or have their output adjusted, to meet fluctuating demand. Example: natural gas, biomass, hydro.

Flexible – power that can be quickly adjusted to match fluctuations in electricity demand and supply. Example: interconnectors, batteries, long duration energy storage.

Variable – intermittent power sources for whom output is dependent on external factors such as the weather. Example: wind, solar.

In championing the global energy transition, the UK has set itself ambitious targets for the end of the decade. The Government has made clear its ambitions for a net zero power grid by 2030, redefining the role of the National Energy System Operator (NESO, formerly the ESO) to provide guidance and targets on how to achieve Clean Power 2030.

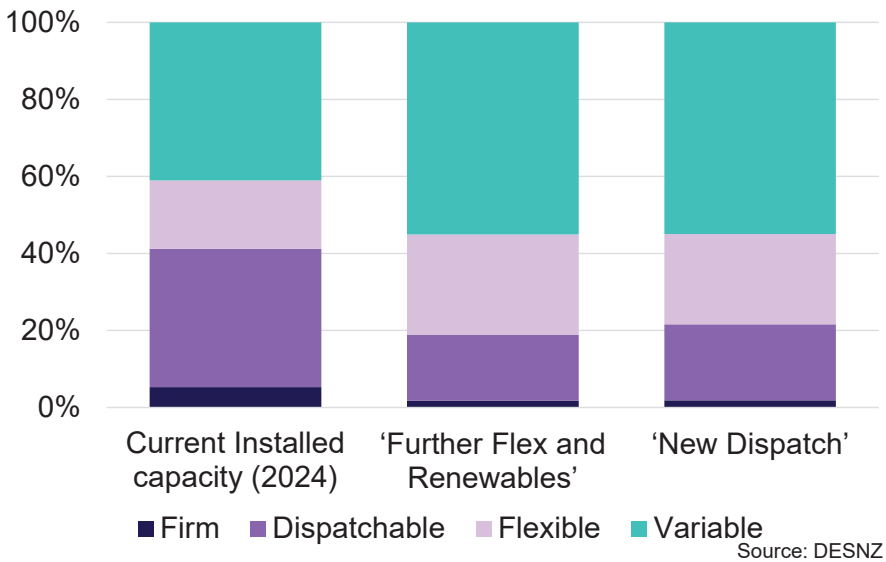
Table 1 (opposite page) showcases the UK's installed electricity generation capacity as of the end of 2024, coupled with targets laid out by NESO in their CP30 guidance. Widely reported challenges remain in meeting NESO's CP30 targets; they require a tripling of offshore wind and solar capacity, doubling onshore wind, and a quadrupling of our battery storage capacity, all within the next 5 and a half years.

The CP30 targets shift the makeup of the UK's electricity sector, transitioning away from firm and dispatchable power sources such as nuclear and gas towards intermittent, weather-dependent power generation sources. To counterbalance the additional risk brought on by an increased reliance on intermittent electricity sources and rising demand, the UK's required generation capacity will need to double.

Table 1
NESO Clean Power 2030 targets

Technology (GW)	*Current Installed Capacity (2024)*	*NESO 'Further Flex and Renewables'*	*NESO 'New Dispatch'*
Total power generation capacity	111.2	227	213
Variable: Offshore wind	14.8	51	43
Variable: Onshore wind	14.2	27	27
Variable: Solar	16.6	47	47
Firm: Nuclear	5.9	4	4
Dispatchable: Low carbon Dispatchable Power	4.3	4	7
Dispatchable: Unabated gas	35.6	35	35
Flexible: LDES	2.9	8	5
Flexible: Batteries	4.55	27	23
Flexible: Interconnectors	9.8	12	12
Flexible: Consumer-led flexibility	2.55	12	10

Figure 8
The transition to Clean Power 2030 will see the UK's reliance on firm and dispatchable power shrink significantly.



Source: DESNZ

Market conditions have shifted dramatically since the COVID-19 pandemic. Prior to the crisis, low inflation and historically low interest rates enabled the offshore wind industry to scale rapidly and reduce development costs. However, in the post-pandemic landscape, the sector is grappling with a combination of project-specific inflation and significantly higher capital costs driven by rising interest rates. Geopolitical tensions have further exacerbated uncertainties, contributing to elevated material costs. Although global demand for offshore wind continues to rise, increasing competition has placed additional strain on supply chains, intensifying cost pressures across the industry. The suspension of Hornsea 4 underscores these growing risks and introduces further uncertainty to the UK's offshore wind ambitions. Such events have meant that, unless we see significant changes in the next couple of years, OEUK expects the UK to reach just 35 GW of operational offshore wind capacity, including 1 GW floating, by the end of the decade. Some 8-16 GW short of the offshore wind targets set by NESO in CP30.

Levelised cost of energy – The total cost of building and operating a power-generating asset over the course of its lifespan, divided by the total energy output of that asset

Overall, renewable energy projects are particularly vulnerable to interest rate hikes due to the high levels of upfront capital investment associated with installing wind farms and solar projects. Typically, these large capital investments are offset by low operating costs over the lifetime of the asset. Analysis by the IEA estimated that a five-percentage point increase in interest rates would push up the levelised cost of wind and solar by a third, yet for gas, the impact would be minimal. Over the past four years, the UK has seen interest rates rise from 0.1% to 5.25% by August 2024, before falling to 4.25% earlier this year. While the interest rate has begun to fall, it is unlikely to return to pre-COVID levels.

Barriers to Progress

Allocation Rounds

Recent Allocation Rounds (AR) have faltered in their ability to deliver the large-scale deployment of offshore renewable projects at the pace that is required to meet our CP30 targets, with AR5 failing to attract funding for any offshore wind developments. Before that, low inflation and low interest rates helped the industry to scale up and reduce development costs. Post-COVID, the industry must face the double threat of specific inflation and higher costs of capital owing to higher interest rates. The geopolitical climate has created further uncertainties, keeping up the cost of materials.

In the latest Allocation Round (AR6), a total of 9.6 GW of renewable energy capacity was awarded, 60% more than in AR5, marking a strong recovery after no offshore wind projects were successful in the previous round. AR6 awarded 5 GW of offshore wind capacity at an average strike price of £54.23/MWh (2012 prices), with some previously unsuccessful projects reapplying through the 'Permitted Reduction' route and securing a higher strike price of £58.8/MWh (2012 prices).

However, of the 5 GW of offshore wind capacity additions, 2.4 GW was assigned to the now 'cancelled' Hornsea 4 wind farm, a further 1.5 GW in offshore wind projects applying through the 'Permitted Reduction' route, leaving less than 1 GW of new capacity additions. Although approximately 20 GW of fixed-bottom offshore wind has now been awarded CfDs, significantly more capacity must be secured in future allocation rounds to meet the UK's 2030 net zero power system target. A recent AFRY study, commissioned by Offshore Energies UK (OEUK), revealed that CfD-awarded capacity will need to more than double, with an average of 5.9 GW needed to be cleared in each of AR6 to AR9.

Given that AR6 fell short by 4 GW, AR7 will need to deliver at least 8.4 GW and allocate a larger budget to floating wind to ensure the UK maintains a leadership position in this emerging sector.

OEUK welcomes announcements on the changing approach to AR7, the shift away from a monetary budget to a capacity budget, which cements the UK's ambitions of maintaining its position as a world leader in renewable power generation. Extending the CfD period from 15 to 20 years will help ensure long-term security of payment for offshore renewable power generation, further de-risking projects and strengthening investor confidence. Relaxing the eligibility for fixed-bottom wind will allow the UK to maximise its potential and should support the acceleration of offshore wind deployment.

CCS Funding

Elsewhere, carbon capture and storage projects remain heavily reliant on government subsidies. For CCS projects in the UK, the average levelised cost varies significantly from project to project, fluctuating based on the type of capture asset, distance from store and type of store.

For midstream carbon capturing, the Levelised Cost of Capture (LCOC) is relatively low at $55 per tonne, power generation has an average LCOC of $81 per tonne, and industrial carbon capture costs can be significantly higher – for example, hydrogen production ($89) and cement ($209). Compared to the capture element, the cost of transport and storage (T&S) is lower, even for newbuild projects where the levelised cost of transport (LCOT) infrastructure averages $19-23 per tonne for onshore and offshore pipelines- with the median levelised cost of carbon storage (LCOS) for projects in the UK being in the region of $25 per tonne.

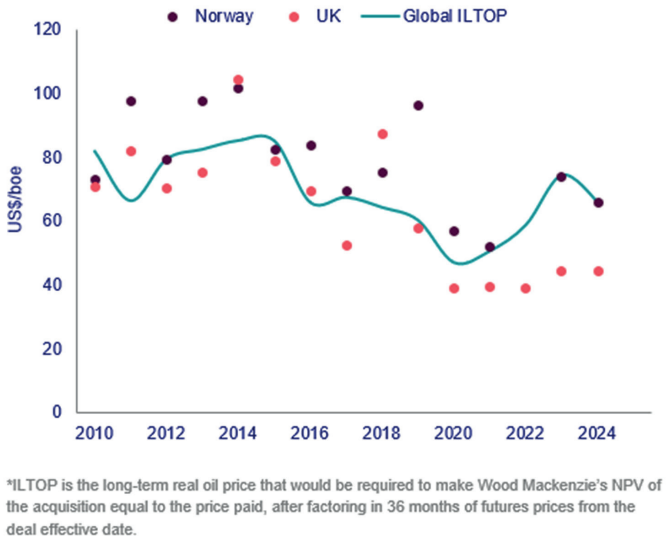
In total, one can expect the levelised cost of CCS (LCOCCS) today to be in the region of £115 and £165/tonne, well below the current carbon price of £50/tonne. So far, the focus has been on Track-1 clusters, which have now reached FID. However, we risk failure if we don't move beyond these projects. Delivering the full project pipeline is essential if the UK is to stay on course for its Net Zero targets. Track-2 clusters are critical to building a resilient CCS sector, and the support provided in the Spending Review is welcome. In parallel, emitters and transport and storage (T&S) systems outside the current cluster sequencing process, also known as post-track projects such as Morecambe Net Zero and Bacton, must be given clear, credible pathways to market.

Today, CCS relies on government support. However, in spring 2025, OEUK published an independent report, commissioned from Arup, that outlines a roadmap for establishing a self-sustaining CCS sector in the UK. Its modelling shows a viable route forward, incorporating the expected trajectory of carbon pricing alongside three key enablers:

1. Cost reductions through technology, competition and collaboration
2. A supportive and transparent policy environment—one that ensures market access, unlocks new revenue streams, and enables UK leadership in a Pan-European CO_2 market
3. A flexible planning system and public buy-in

Without these, the UK risks a stalled CCS sector, marked by high costs, limited scale, poor global alignment and growing public resistance. The direction is clear, and industry stands ready to deliver. OEUK members are already investing across the CCS value chain: from multi-million-pound FEED studies and carbon store appraisals to the UK's first CO_2 test injection into a depleted gas field, and proactive supply chain engagement to maximise UK content.

Figure 9
Fiscal uncertainty is devaluing the UKCS assets.
Figure supplied by Wood Mackenzie.



Fiscal & Regulatory Uncertainty

The sector's difficulty in securing investment is characterised by a triad of challenges: access to finance, regulatory burden/barriers and returns on investment.

Accessing finance poses differing challenges depending on the sector in question. Offshore renewable energy projects will be awarded greater access to public funding due to their substantially lower carbon footprint. However, high upfront capital costs, risk associated with newer intermittent technologies, and their sensitivity to interest rate changes will all play a part in increasing the cost of borrowing when compared to their oil and gas counterparts. In contrast, the challenge for oil and gas projects does not lie with the cost of borrowing but in their ability to borrow, with many banks shifting away from oil and gas investment due to climate change concerns and rising investor activism.

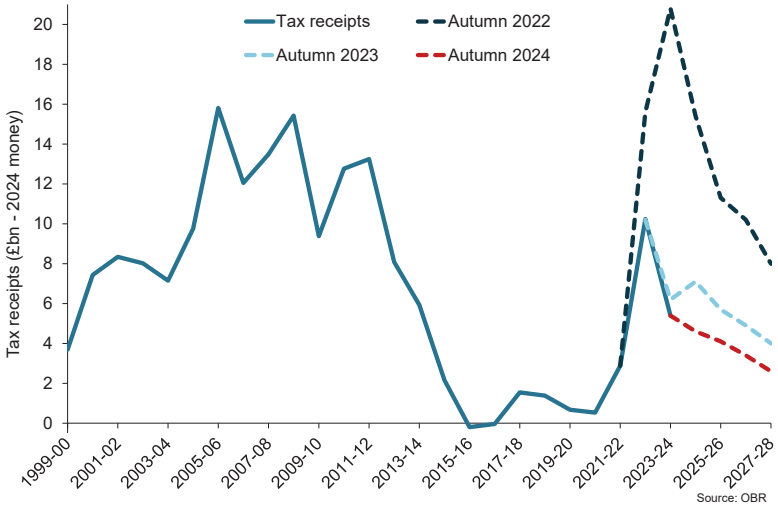
The regulation of energy projects also plays a role in securing investment. Through licence award, permitting, and setting standards, it is no longer the case that a project with fiscal backing will be developed. The challenges posed by increasingly tight regulations are slowing the development of offshore energy projects. For oil and gas projects, there are significant difficulties in securing a licence. In carbon storage, the current guidance on leakage requires that stores show there is no significant leak risk. Applying a zero-tolerance approach to leakage challenges the pace at which storage sites can be awarded. There have been calls from industry for an as low as reasonably practicable (ALARP) approach to be taken, in line with the oil and gas sector. The time taken from concept to FID for most offshore wind projects still falls within the range of 8-13 years, of which half is in the seabed leasing, consenting and grid connection phases. If we are to meet our lofty CP30 targets, then we will need to see acceleration of this process.

Finally, the returns on investment have and will continue to be a major sticking point for many offshore energy projects operating in the North Sea. Low commodity prices stretch already challenging project economics in the oil and gas and CCS sectors, with oil prices at their lowest point since the pandemic and carbon prices less than half the required price point for independence. Offshore wind and hydrogen projects face the challenge of prolonged pay-back periods, with the average time to become net positive exceeding 10-15 years.

Quantifying the impact of fiscal uncertainty can be challenging; however, when observed in figure 9 on a macro level, it becomes apparent that UK assets are being devalued compared to our North Sea counterparts. This divergence of UK, global and Norwegian asset value correlates with the increased uncertainty placed on the UKCS over the past 4 years, along with the introduction of the Energy Profits Levy (EPL). Across this period, the UKCS deal price has been traded at a $20/boe discount on deals on the Norwegian Continental Shelf (NCS). Reflecting a structural loss of value to the UK economy running into the £billions.

Figure 10

Tax receipts from the oil and gas sector continue to fall well below the forecasts from the introduction of the windfall tax.



Oil and Gas Price Mechanism

The EPL, introduced in May 2022, was initially set at 25% and lasted until 2025. It was later increased to 35% and concluded in 2029. Following the General Election last year, the EPL was increased by a further 3% and extended to 2030. The levy is designed to tax exceptional profits from oil and gas production, particularly those arising from high prices. However, the environment in which the Energy Profits Levy (EPL) was introduced no longer exists. Oil prices have fallen substantially, and gas prices are no longer sitting at record highs.

As such, the EPL has not delivered the expected tax revenue, with less than 40% of the forecast 2022 tax revenue now expected to be achieved in the period from 2023 to 2028. In Autumn 2022, the OBR forecast that the total expected tax from the UKCS in the period 2023 to 2028 would be £65.7 billion. In March 2025, the OBR revised its forecast for the total tax take for the same period to £21.1 billion. The OBR expected tax yield for the same period has continuously fallen over the last 2 years despite ongoing fiscal changes.

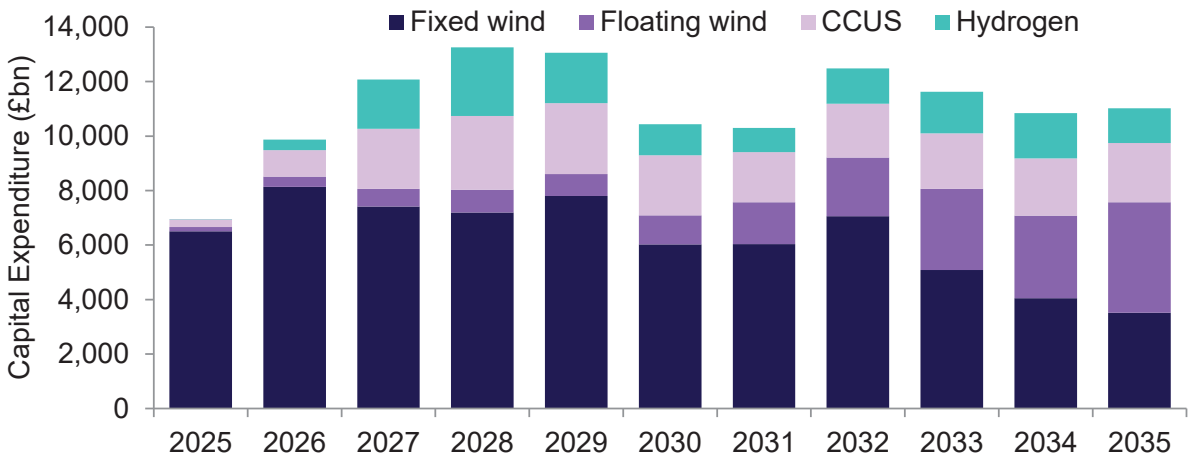
In 2024, the UK's total energy production was at a historic low, with over 40% of the UK's energy needs met through imports. Without sustained investment, the UK will be reliant on imports for 70% of its oil and gas demand by 2030. Significant oil and gas reserves remain in the North Sea that can be unlocked to support energy security aligned with the UK's climate ambitions. With continued support for the sector through existing licences, responsible access to new licences where needed, and a return to a competitive and stable fiscal and regulatory environment, the UKCS could increase this number, delivering over half of the UK oil and gas demand between now and net zero in 2050.

Unlocking Potential (Decarbonisation & Energy Security)

Access to finance has been a repetitive theme across the UK's energy sector, as projects, and importantly, developers require certainty of infrastructure costs and future revenues. As previously mentioned, the rise in interest rates since 2021 has resulted in heightened costs for developers of large-scale renewable energy infrastructure. Previously advanced

Figure 11

Risked UK offshore renewables spend is expected to exceed £110bn over the next 10 years.



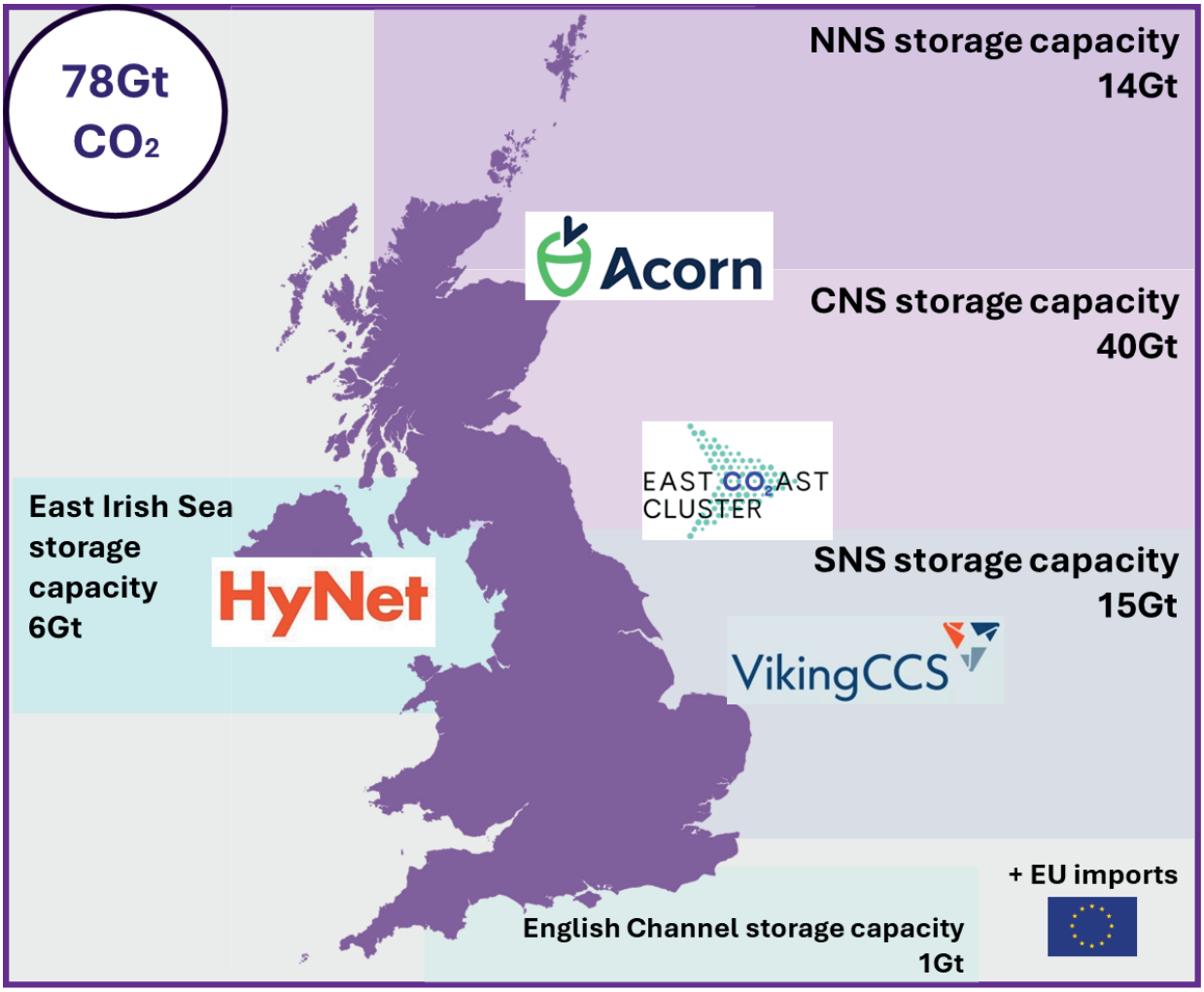
projects such as Hornsea 4 have been stalled, citing rising supply chain costs and interest rates.

Continuing to set an administrative strike price that reflects the rising cost of the supply chain and capital in AR7 will be vital in ensuring continued investment in renewable energy. In tandem, the rising role of GB Energy as a partner in the development of projects deemed critical to national energy security will de-risk energy projects and ensure that the UK promotes the rapid scale-up of domestic energy supplies.

CCS projects face a similar challenge; two major CCS clusters have reached FID, with a further two progressing slowly along the same path. The huge volumes of public investment have derisked these projects, providing a stable platform for private investment. However, this is a short-run strategy, and to achieve long-term independence, we must see carbon prices align with the Market Traded Carbon Values' DESNZ scenario. In conjunction, the talks in May on closer ties between the UK and EU economies, notably ETS-linkage, are promising, and further progress will help stabilise the market and encourage further investment in UK carbon storage projects, ensuring a sustainable future.

Unlocking access to finance would have a resounding impact on the UK's offshore energy sector, from expanding the workforce to growing domestic supply chains for future export. OEUK has been looking into a risked pipeline of projects and the opportunities available under the current fiscal and regulatory regimes. Identifying the capital expenditure opportunity in the offshore wind (fixed-bottom and floating), CCS (Transport & Storage) and Hydrogen sectors. Under the current regime and pre-AR7, HAR2 and Track-2 FIDs, we expect the total risked capital expenditure in offshore renewables projects for the next ten years to exceed £110bn. This approach is dynamic and will be adjusted as we progress through the energy transition.

UK Contential Shelf, storage potential



SECTION 6:

ENERGY PRICING AND MARKET TRENDS

6

Price Trends

Oil Prices

The Brent Crude price saw an initial bounce at the start of 2024, peaking in mid-April at $93.12/bbl before steadily declining throughout the remainder of the year, settling at $75/bbl by December. This steady decline has continued throughout 2025, owing in large part to the OPEC+ alliance rolling back on the production cuts issued in 2022/23 along with the increased output of major supply nations such as the United States, Canada and Brazil.

Despite early signs of a slowdown in global oil demand growth emerging, +0.8% in 2024, well below the 10-year average, the supply of oil to the global market continues to expand. The IEA anticipates that global oil demand will increase by a further 2.4million barrels per day by the end of the decade. At the same time, global oil production capacity is forecast to increase at twice that rate, 5mb/d, reaching 114.7mb/d by 2030.

In recent months, the Brent Crude price has rebounded, exceeding $80/bbl for the first time in 5 months in mid-June, responding to trade uncertainty driven by conflict in the Middle East. Despite this uncertainty, the influence of Iran and Israel on the Brent market is minimal given their trading relations with the rest of the world. As such, OEUK does not expect the inflationary pressures to be held for a significant period and expects the global oil supply surplus to have a greater impact on the long-term price of Brent Crude Oil, keeping prices low for the foreseeable.

Expectations of a subdued oil price have once again brought the continued validity of the Windfall tax into the spotlight, at least the ESIM oil threshold price. At the time of writing, the 6-month rolling average Brent Crude price has remained below the ESIM oil threshold price of $76.12/bbl for five months. The profits earned by operators in 2022 and 2023, following the energy crisis, are no longer there, and without careful consideration towards the current oil and gas price mechanism, we risk energy security through the accelerated decline of our Oil and Gas sector.

A stable and competitive fiscal regime is fundamental to de-risk investment in the UK. There is a significant opportunity for jobs, energy security, and value to the economy under the right fiscal and regulatory policy environment. Ongoing fiscal uncertainty and the EPL, introduced to target high commodity prices that have since dissipated, place a risk premium on investment in the UK, which is not seen in other North Sea jurisdictions.

Figure 12

The UK oil price has been below the ESIM oil price threshold of $76.12/bbl since April 2025.

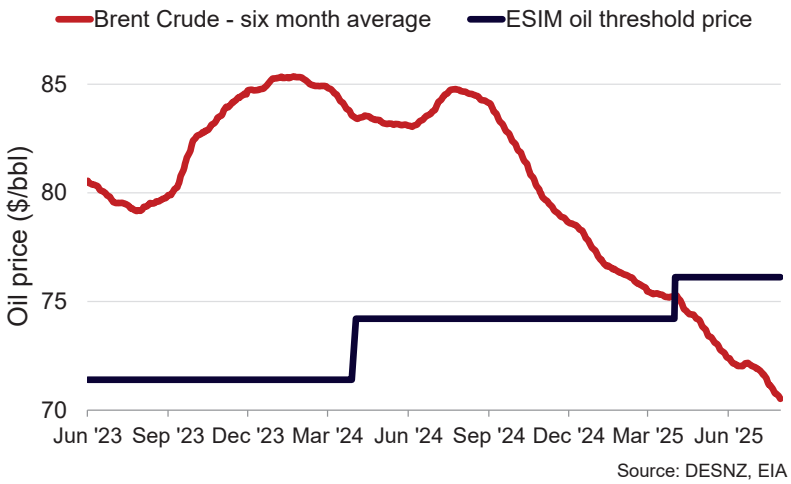


Figure 13

Gas prices have stabilised following a Q1 Dunkelflaute, a period marked by dark skies and calm winds that suppressed renewable output.

Gas Prices

Gas prices have been volatile since the Russian invasion of Ukraine in early 2022. The seismic overnight reshuffle of the European supply of gas saw prices spike to record highs. The resulting impact was an "energy crisis" across mainland Europe and the UK - the fallout of which remains widespread. However, settling tensions and renewed confidence in the long-term supply of natural gas, the primary source of heating and electricity generation for much of Europe, have seen spot and forward contract prices fall over the past 12 months.

The colder-than-average period, experienced at the start of the year, saw accelerated gas storage withdrawals, alongside unplanned outages at Teesside CATS, Norwegian gas processing plants and the Freeport LNG facility in Texas. The resulting impact was a 10% rise in the monthly average NBP gas price in January, to 123p/therm, almost twice the

January average in 2024 - the highest sustained prices since the end of the energy crisis. During this period, natural gas regained its position as the largest supplier of electricity in the UK for the first four months of 2025, providing almost 40% of UK electricity needs in January.

Since April, the day-ahead NBP gas price has settled around 80p/therm, settling nerves on the impact of conflict in the Middle East, which has tempered a solitary spike in June. Bearish drivers, including cooling temperatures, rising gas storage levels and consistent flows of LNG imports, mean that gas prices are unlikely to rise throughout the summer months. Maintaining the UK's ability to produce, process, store and distribute natural gas will be vital to preventing future long-term price spikes.

Electricity Prices

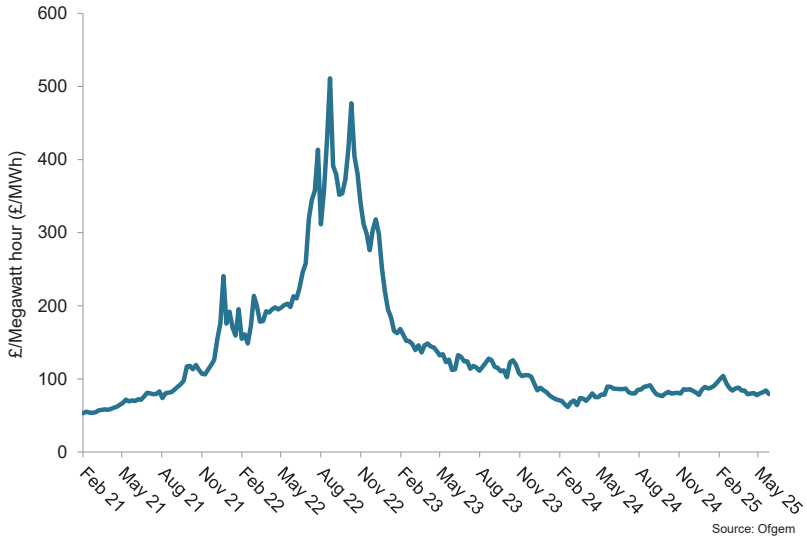
Since January 2024, wholesale electricity prices have stabilised, following the extreme turbulence during the energy crisis in 2022 and 2023. Today prices hover around £90/MWh, having exceeded £100/MWh for the first time since 2023 in January this year. The intermittency of wind and solar power generation, combined with a shortage of gas storage, led to a natural gas demand peak and subsequently a surge in electricity prices.

While it is true that wholesale electricity prices are set by dispatchable power sources, currently natural gas, this tells just 40% of the story. In the most recent energy price cap (1st July – 30th September), the wholesale electricity price contributed to £734 of the £1,720 total, 42.7%. The remaining 57.3% is comprised of policy, operating and network costs.

Preparing the UK's gas and electricity networks for a Clean Power 2030 model will require significant investment and nearly 1,000km of new onshore cables and 4,500km of offshore cables. By the end of the decade, the UK could see investment in electricity networks reach £80bn. This would fund the biggest expansion of the electricity grid since the 1960s, but risks placing a heavy burden on consumer bills. Ofgem expects that the investments made over the next 5 years will lead to an additional £104 in charges on household bills (£74 for the electricity grid and £30 for the gas networks).

Figure 14

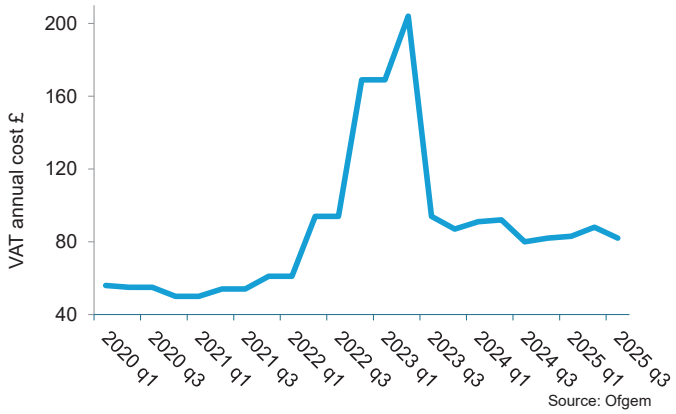
Wholesale electricity prices have fallen massively since their peak during the energy crisis in late 2022.

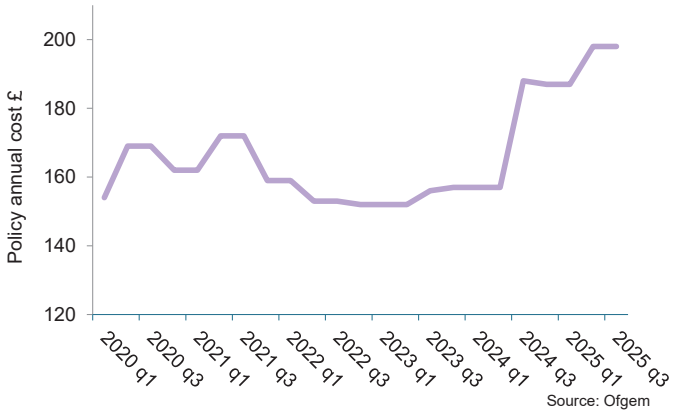


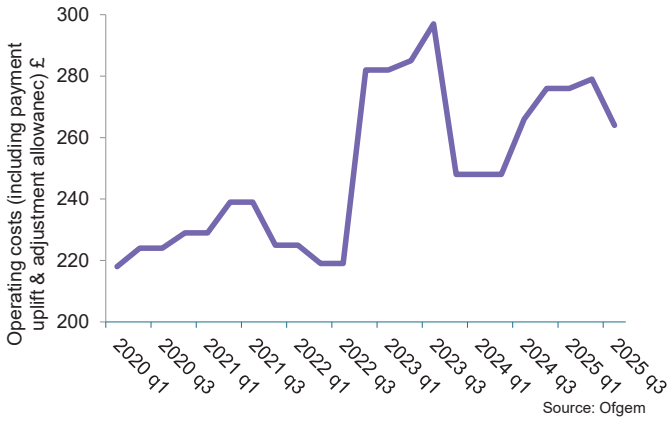
Source: Ofgem

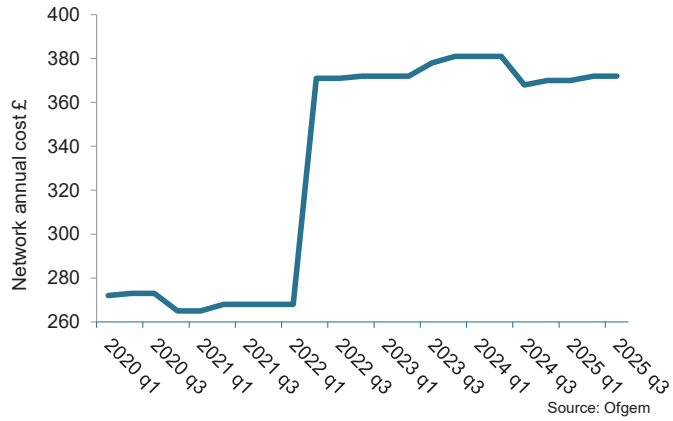
Figures 15 a, b, c, d

While wholesale energy costs have fallen in recent years, network, operating and policy costs continue to rise.







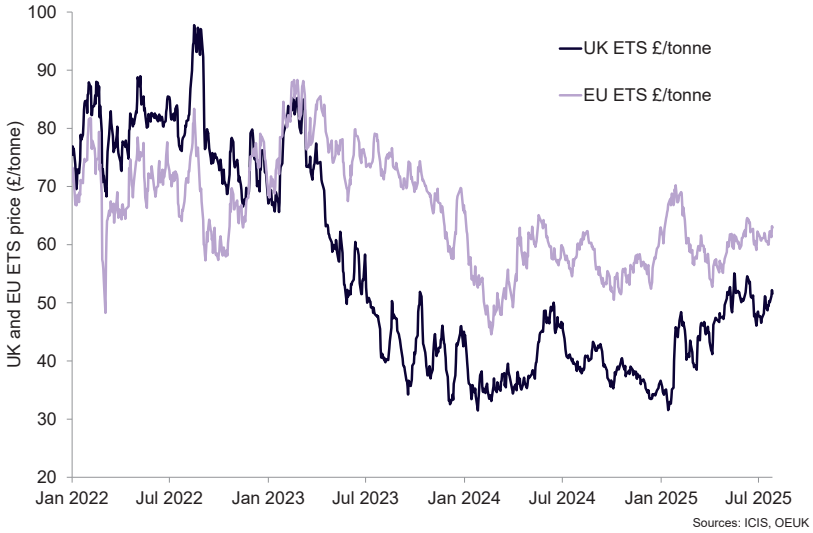


On top of this, the scale-up of our energy generation capacity will cost hundreds of billions. OEUK's risk forecast of the new energies pipeline indicates that spending in H2, offshore wind, and CCS (transport & storage only) alone could cost around £130bn in the next 10 years. With many projects uneconomic without public policy support, these funds will need to be met elsewhere. The primary subsidy support mechanism for renewable projects in the UK, the CfD Allocation Rounds, is funded through electricity supplier obligated payments to the Low Carbon Contracts Company (LCCC). Ultimately, these supplier payments are funded by consumers through their electricity bills.

Monitoring these policy costs over the past five years highlights a growth in policy costs of almost 33%, or £50 per household per year. With OEUK and other industry bodies calling for AR7 and AR8 to be the largest we have seen, and a growing need for a rise in the strike price (£/MWh), the role of policy costs will continue to place a heavy burden on consumers before we see long-term cost reductions come into play.

Figure 16

UK and EU ETS prices are the closest they have been for two years, reflecting the closer ties between economic regions and prospects of future realignment.



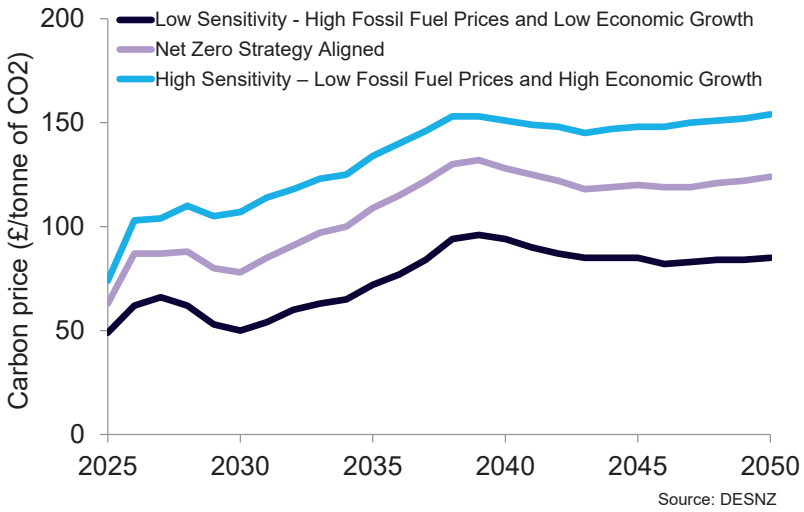
Sources: ICIS, OEUK

In a similar fashion, the network and operating costs have seen steep rises in recent years. The UK's commitment to improved networks, in the long-run, will provide cost reductions, energy market efficiencies, and crucially, a reduction in the much-maligned curtailment costs of turning off wind projects. However, the short-term impact is already being felt on consumer bills, since mid-2022 annual network costs per household have increased by roughly £100 or 37% in response to huge investments being made in the UK's national energy infrastructure.

Short-term impact is already being felt on consumer bills, since mid-2022 annual network costs per household have increased by roughly £100 or 37%

Figure 17

UK carbon prices could rise to a level that allows CCS projects to become self-sufficient by the mid-2030s.



Source: DESNZ

Carbon Prices

The UK and EU Emissions Trading Schemes (ETS) were officially delinked at the end of 2020, following the UK's departure from the European Union, with the UK ETS being launched thereafter in May 2021. Despite the official Brexit uncoupling, the two carbon prices maintained a strong correlation until early 2023 before a significant divergence was observed as the British price weakened in comparison. The UK ETS carbon price averaged below £39 for the year 2024, but, following a near-12-month low in January this year, the carbon price has seen a marked climb, reaching above £50 through May and June.

By way of comparison, the EU's equivalent carbon permits, EUA, are currently trading at around £60 per tonne. This is the closest the two markets have traded for over 2 years. The narrowing gap between these two markets is reflective of the softening relations between the UK and EU governments, particularly around the alignment of their respective emissions trading schemes.

This talk of alignment is further underscored by positive discussions in May around bilateral ETS linkage, which could pave the way for a harmonised approach to carbon pricing and emissions reduction across the region. It would also soften the impact of the EU's Carbon Border Adjustment Mechanism (CBAM) for domestic heavy industries and electricity generators, among others.

If the UK carbon market can maintain gains realised this year, the price will exceed the 'Market Traded Carbon Values' DESNZ scenario, with contingencies modelled for unobservable market factors affecting the carbon value while the market establishes itself prior to net zero alignment from 2028. DESNZ foresees the UK carbon price doubling by the early 2030s, reaching £100 per tonne by 2034. By this stage, the scope of the ETS will have expanded to include maritime, aviation, and waste, among others. The UK will have also implemented its own CBAM, imposing compliance burdens on imports of goods to the UK.

For many industries, the current trajectory in carbon prices signals an increase in operational costs. This, in turn, may catalyse accelerated investment in decarbonisation technologies and more sustainable business models. Green alternatives are also beginning to drive a premium in European markets with the emergence of green cement and steel. While costlier, they provide a low-carbon alternative to manufacturing and construction.

A rising carbon price, however, is a welcome sight for those operating CCS projects, following a troubled period underpinned by growing costs, delays in funding award, and falling revenues from the oil and gas sector. This is the first step in unlocking the full potential of the UK's CCS sector. Our report, published alongside ARUP, highlights 9 principles, in addition to stable carbon price signals, that need to be achieved to drive investment. These include enabling CO_2 networks (rail and marine), closer alignment of the UK and EU ETS, and signing bilateral agreements to allow the transport of CO_2 across international borders. As regulatory frameworks evolve and international collaboration deepens, both businesses and policymakers will need to remain agile to navigate the complexities of the carbon market landscape.

Working together, we are a driving force of the UK's energy security and net zero ambitions. Our innovative companies, people and communities add value to the UK economy.

Join us today and help strengthen the UK offshore energy industry and your business.

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