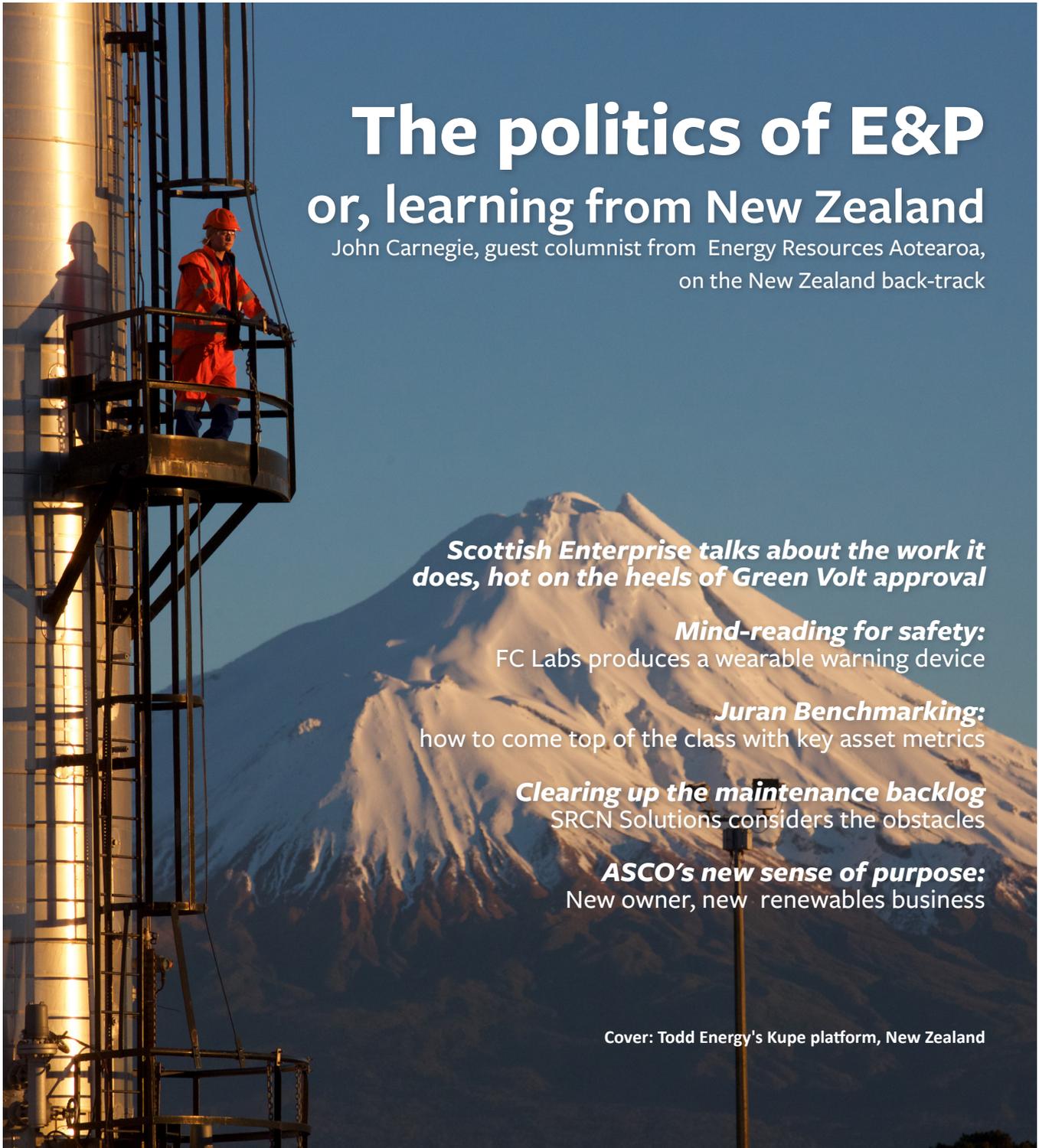


# OFFSHORE ENERGIES

Issue 60 September 2024

The quarterly magazine for the UK offshore energy industry



## The politics of E&P or, learning from New Zealand

John Carnegie, guest columnist from Energy Resources Aotearoa,  
on the New Zealand back-track

**Scottish Enterprise talks about the work it does, hot on the heels of Green Volt approval**

**Mind-reading for safety:**  
FC Labs produces a wearable warning device

**Juran Benchmarking:**  
how to come top of the class with key asset metrics

**Clearing up the maintenance backlog**  
SRCN Solutions considers the obstacles

**ASCO's new sense of purpose:**  
New owner, new renewables business

Cover: Todd Energy's Kupe platform, New Zealand

# Oil and gas to remain key in the UK energy mix up to 2050 and beyond

While there will be a fundamental shift in the energy landscape in the coming decades, DNV's landmark UK Energy Transition Outlook (ETO) 2024 report forecasts that fossil fuels will still account for a third of the UK's primary energy supply by 2050.

For 160 years, DNV has built trust and confidence between parties, driven by our purpose to safeguard life, property, and the environment. This latest edition of the UK ETO provides a single forecast for how the energy transition will likely pan out, not a scenario as not all futures are equally likely. It accounts for expected developments in policies, technologies, and associated costs, as well as some behavioural changes.



Download the report to find out more

[dnv.com/etouk](https://dnv.com/etouk)



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# Welcome to *Offshore Energies UK* #60

**M**uch has happened at home and abroad since the publication of the last magazine. But – with the notable exception of our large haul of medals from the Olympics – little of it is particularly encouraging for UK householders and manufacturers. As the wheel of progress turns, the Labour government is now in the ascendant, threatening to pit country-dwellers and farmers against the promised march of the pylons and the wind or solar farms as the planning rules are relaxed.

After 14 years in opposition, a Labour government won the general election with a huge majority based on a slender mandate. The party now has control over energy policy as Ed Miliband returns to his old role when in opposition; while the North Sea Transition Authority balances its twin goals of maximising economic recovery against decarbonisation. The latter objective appears to be winning the struggle, although it would be unfair not to mention the higher tax regime – which was first introduced by the Conservative government – as another disincentive to invest for the long-term in the UKCS.

It is small consolation for the UK to reflect that things are not much better across the Channel. No man is an island, etc and events and struggles far beyond Britain's borders continue to play as big a role as ever in our politics, by virtue mainly of their effect on energy flows and hence on the national economy. Tata Steel and Grangemouth are two cases in point.

The higher gas prices rise, the more other energy will cost, since demand for it will go up as customers change supplies. Switching fuels used to be the conventional approach to exceptional prices – but there is not much else to switch to at short notice in Europe. There is one coal plant left in the UK, due to close this year; Germany has closed down its nuclear plants. France and Norway are taking up the slack, fortunately with low carbon.

Meanwhile further abroad, things are still uncertain. Ukrainian troops have spilled over the border and made inroads into Kursk in southwest Russia, making peace talks even less likely for the time being. Key European gas transit infrastructure at Sudzha is now (late August) in Ukrainian hands. Iranian-backed militia in the Middle East are still affecting shipping. Wholesale oil and gas prices therefore continue to surprise to the upside – except in the US, which is looking forward to producing the cheapest natural gas outside the Middle East for years to come.

The omens are not good either for liquid renewable energy sources, here or in the US: several majors have shelved plans for refining biofuels on their own, but possibly continuing with a mixed processing of petroleum and biofuels. For example in July Shell paused its 820,000 tonnes/year biofuels plant in Rotterdam on economic grounds, despite being “committed to our target of achieving net-zero emissions by 2050, with low-carbon fuels as a key part” of its strategy. It will seek to “deliver more value with less emissions.” To quote the Norwegian certification agency DNV’s July 2 post, “as the Net Zero mandates gather pace, refinery owners face some difficult and stark decisions, such as transition or face closure.”

The problems outlined above show the dilemma facing the present government: if it moves too fast with zero-emission projects that depend on state support for years before any pay-back, there will not be much money for other essentials. Decarbonised gas will be essential for 2030 net-zero power, so all eyes will be on the all-important government talks with carbon capture and storage project developers this autumn. Equally, having raised the fiscal bar for oil and gas producers, that route is also unlikely to attract investors, meaning more imports with a bigger emissions footprint.

The continuing wave of mergers and acquisitions offers a glimmer of hope for future production: small companies can expand rapidly at one fell swoop, as Viaro has done, doubling its output as it bids for Shell Expro. Ithaca, buying most of Eni UK, which bought most of Neptune, is another example. And Harbour is another. But overseas assets might be the attraction, at least in the latter cases.

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## Treasury Secretary, industry discuss future

Exchequer Secretary to the Treasury, James Murray MP co-hosted a Fiscal Forum at Offshore Energies UK's Aberdeen offices August 12 for a meeting with industry leaders.

The impact of changes to further extend and raise the Energy Profits Levy and the potential removal of critical capital allowances for the sector were central to discussions. While the tax has been confirmed, other details affecting the investment decisions will become clear only at the time of the Autumn Budget.

These policy changes are rocking the confidence of firms and their investors in the UK's global competitiveness and its ability to achieve the energy transition. The offshore energies sector is a strategic national asset, supporting 200,000 jobs throughout the UK and contributing £20bn/yr to the Treasury,

underpinning national energy security. These revenues and jobs are both at risk as oil and gas producers reappraise the UK's investment proposition.

OEUK CEO David Whitehouse said: "We thank the minister for the frank meeting. Discussions between government and industry in the coming weeks before the Autumn Statement will be vital to secure investment in the sector and deliver on the government's commitment to safeguard jobs.

"The minister again heard in no uncertain terms direct from senior business leaders about the impact these proposals are already having for businesses of all sizes and their skilled people right across the whole of the UK. Decisions made by this government in the coming weeks could jeopardise thousands of jobs and billions of pounds in economic value."

## New Supply Chain Champ for UK CS

The UK offshore energy sector's representative body OEUK has announced Steve Nicol, Executive President of Operations at leading consulting and engineering company Wood, as the new supply chain champion for the sector.

Based in Aberdeen, Mr Nicol succeeds Sian Lloyd Rees, the head of Awen Solutions. She was appointed inaugural supply chain champion in 2021, a role that emerged from the North Sea Transition Deal.

Mr Nicol will support Offshore Energies UK (OEUK) in its work across industry, governments, and regulators to build, enable, grow and sustain the UK's offshore energy supply chain.

In one of her final steps as outgoing champion, Sian Lloyd Rees set out her thoughts on the future of the offshore energy supply chain in a report published by OEUK.

The report and the announcement of the new champion were made ahead of a reception hosted by OEUK in Aberdeen August 23. The report was presented to the Labour party's energy minister Michael Shanks MP during his meeting with offshore energy companies.

In her report, Ms Lloyd Rees highlighted the need to build on UK industrial

strengths which, with timely support, could help accelerate progress towards the UK government's energy and net zero ambitions.

The UK's industrial strength and its steady output of technological innovations will be necessary to its economy and security.

Thanking Ms Lloyd Rees for her contribution, OEUK CEO David Whitehouse welcomed Mr Nicol as the new Supply Chain champion. "As a major employer and an OEUK board member, Steve will be an excellent ambassador in our ongoing efforts to raise awareness of the UK's world-class energy supply chain," he said.

Mr Shanks MP will be opening the 2024 OEUK Conference. He is expected to talk about the importance of the sector in a keynote speech addressing industry experts and attendees.

In an August 21 statement announcing the keynote speaker, Mr Whitehouse said: "Stable and supportive policies, clear, long-term commitments, and surety for businesses to invest – that is what this country needs in the wake of the election. That is what this industry is asking for to deliver a skilled, secure, and sustainable future."

## Message from our CEO



David Whitehouse  
CEO,  
Offshore Energies UK

Two months into the new UK Labour government's term of office, the important work has begun. Our new Chancellor faces serious challenges to balance the books today and get the economy growing tomorrow. The Treasury has been tasked with being 'the most pro-growth in our country's history', and the Chancellor has committed to 'working hand-in-hand with business.'

Partnership between industry and government will be key to unlocking the opportunities of the energy transition. OEUK continues to engage with stakeholders across all the main government departments advocating on behalf of OEUK membership.

The journey to net zero must be focused on attracting investment, growing our economy, and supporting our world class supply chain and people and skills. In August OEUK hosted a Treasury minister in Aberdeen who spoke of the need to attract investment and honour the government's commitment to safeguard jobs.

Our industry shares the ambition of the UK government for a clean energy future. This future can only be achieved through partnership and policies that support jobs, attract investment and anchor businesses here in the UK. The offshore energy sector supports over 200,000 jobs: we need their skills and expertise to deliver our shared ambitions for the sector both now and in the future.

Our sector can be a trusted and responsible partner to the UK economy. We have an industrial heritage that must be championed by industry and government. In September, OEUK launched its Emissions Reduction Report, marking a pivotal moment in the sector's efforts to cut carbon emissions and promote sustainable practices.

Working together, with an attractive investment environment and a strong industrial economy, the UK's offshore energy companies could invest £450bn in homegrown energy production by 2040. If we get this right at home, the export potential is huge.



## DESNZ sets up Mission Control for net zero

The Secretary of State for Energy Security and Net Zero (DESNZ) Ed Miliband has made the former chair of the Climate Change Committee Chris Stark responsible for ensuring that Great Britain has cheaper and cleaner power by 2030. He has appointed him CEO of the new 'Mission Control' – a one-stop shop that brings together a top team of industry experts and officials to troubleshoot, negotiate and clear the way for energy projects.

It will work with key energy companies and organisations including the regulator Ofgem, the National Grid and the Electricity System Operator (ESO) to remove obstacles and identify and resolve issues as they arise. This will speed up the connection of new power infrastructure to the grid, and cleaner, cheaper power to people's homes and businesses.

Mr Miliband said that the Mission Control centre, "benefiting from the expertise and experience of Chris Stark's leadership – and bringing together the brightest and best in the national interest – will have a laser-like focus on delivering our mission of clean power by 2030."

Mr Stark said that tackling the climate crisis and accelerating the transition to clean power is the country's biggest challenge and its greatest opportunity. He said it would also cut bills for households.

Mr Miliband also asked the ESO to provide advice on the pathway towards the 2030 ambition, with expert analysis of the location and type of new investment and infrastructure needed to deliver it.

ESO CEO Fintan Slye said he was "excited to work with the Secretary of State on the blueprint for the future of our power system" and looked forward to working with industry and stakeholders across Great Britain. The aim is the rapid increase in rolling out domestically produced clean energy, cutting dependence on volatile fossil fuels, "which is central to protecting billpayers, creating good, well-paid jobs and combating the climate and nature crisis."

Mr Miliband chaired the first Energy Mission Board July 31, having convened ministers to "ensure a relentless focus on delivering the Clean Energy Superpower mission."

The first meeting followed the steps Mr Miliband had taken to kickstart this work, including scrapping the onshore wind ban, unlocking solar production and launching Great British Energy's major partnership with the Crown Estate. GBE was, at time of press, rumoured to be based in Aberdeen.

To further support the rollout of new clean energy projects, he also confirmed the biggest ever budget for this year's renewables auction – at over £1.5bn.



Ed Miliband  
Secretary of State  
for Energy Security  
and Net Zero

## UK to host IEA security summit

Britain will host a summit on international energy security next spring, convened by the International Energy Agency, the security watchdog said August 2.

It is concerned that the energy transition could fail, owing to a mix of existing risks and new ones that might materialise.

The summit therefore will assess the best way of dealing with these risks – geopolitical, technological and economic – while there is still time. The IEA said that the threats call for "new and enhanced approaches to energy security – fit for today and the decades ahead – to ensure uninterrupted access to affordable energy."

The 2015 Paris Agreement aims to achieve net zero emissions by 2050. But there are still major milestones ahead for the UK, such as a viable carbon capture and storage market.

Since it was set up 50 years ago, the IEA has supported energy security with key actions during the global energy crisis but has lately faced criticism from the US for its zeal in promoting decarbonisation instead of security (*OEUK Magazine*, p21).

The summit will provide global decision makers and key actors with an opportunity to review the trends redefining global energy security. These include changes in energy demand, supply and trade; the adoption of clean and efficient energy solutions; the availability of the minerals and metals required for clean energy technologies – from wind turbines and solar panels to electric vehicles and battery storage; and the allocation of investment during the transition away from fossil fuels.

IEA CEO Fatih Birol said: "As the nature of energy security evolves amid looming threats, the IEA will continue to do all it can to ensure uninterrupted access to energy at affordable prices while honouring global climate commitments."

UK Energy Secretary Ed Miliband said: "Since the Russian invasion of Ukraine global energy security has become more important than ever." He said he looked forward to working with the IEA "to mobilise action for cheap, clean, secure energy as we drive forward the global energy transition."

## Unite: 'No ban without a plan'

Concerned that the Labour party is moving too quickly to halt oil and gas production, the Unite union has urged the government to provide some other means for fuelling the economy as a precautionary measure. It drew comparisons with the last major government intervention in energy markets: the miners' strike.

Then, it was the North Sea's oil and gas resources that eventually enabled the UK to become a net exporter of gas.

"We need serious investment in wind manufacturing and it is imperative that a huge increase in offshore wind power goes hand in hand with the creation of well-paid jobs in the renewable sector in the UK," it said June 27.

"Oil and gas workers are faced with an uncertain future which is not being helped by Labour's policy on North Sea exploration licences. We must not allow them to become the coal miners of our generation." It said that the government's policy on net zero for the North Sea was to ban all new licences but that it does not have a detailed plan on a fair 'workers' transition to greener energy on which so many jobs depend.

"This could lead to us importing more oil and gas when we have it on our doorstep. Secondly, there is still absolutely no plan on wind power manufacture, in Scotland and the UK, or commensurate new 'green' jobs for North Sea workers," it said.

### Unite calls for support for:

- **Jobs:** create 35,000 new energy transition jobs in Scotland by 2030.
- **Conditions:** transitioning North Sea workers need good union jobs with pay, pensions and other conditions commensurate with their current roles.
- **Security:** make Britain energy self-sufficient.

### GMB backs oil & gas

The GMB Union has already voiced its support for its workers in the oil and gas sector. Members visited the offshore Kraken platform along with some of OEUK's leadership team.

Union head Gary Smith said during the May 19 trip that it was "vital that worker voice is front and centre of the debate over the UK's energy and industrial transition. Change must be done with and not to the people doing so much to help keep our homes warm, lights on and economy running."

He said the union was "determined to develop better co-operation across the offshore and wider energy sectors to maximise this important principle as we fight for the jobs, investment, and energy security the UK needs." (*OEUK Magazine, #59, p5.*)

## Labour confirms levy

The Labour government confirmed further details on the windfall tax in the House of Commons late July.

The news came in a late-afternoon policy paper issued without warning after the Chancellor's fiscal statement.

But it will not be until the autumn statement that the full details of its plans for raising revenues and allowable expenses for operators in the oil and gas sector will be published. Some producers are waiting until then before commenting.

The higher tax rate and the extension of its effect and the potential removal of critical capital allowances for the sector were central to discussions. The changes have left producers and the supply chain uncertain of the future climate for investment in the UK.

When in opposition, the shadow chancellor of the exchequer said that a Labour government would raise the Energy Profit Levy (EPL) by 3 percentage points, taking the headline tax rate for the sector to 78%. It also extended the levy to 31 March 2030 and removed the investment allowance. It also signalled further reductions in capital allowances.

The decarbonisation allowance and the levy's price floor – the Energy Security Investment Mechanism – will remain in place.

OEUK CEO David Whitehouse said that this was not "partnership working between government and industry" and the announcements came without any meaningful engagement with the sector, which employs several hundred thousand people.

"We recognise the government has significant spending challenges to manage, but today's announcement will only serve to rock confidence further... "Announcements like this without engagement are no way to treat these hard-working people," he said.

*OEUK has published its analysis of the impact that the EPL will have on the UK's economic growth. It foresees heavy losses in terms of oil and gas output, energy security and higher import bills.*



Offshore workers - Ninian Central platform (credit: Unite)

## Making sense of the seismic data at OEUK

Marine geophysics firm PGS held a southern North Sea workshop on data interpretation for members and guests in OEUK's London office. Reflecting the level of interest, the room was filled to maximum capacity.

PGS led the workshop with additional input from Professor Adam Jurgen of Royal Holloway College, London, on behalf of authors of some PhD projects. There were interactive workshops and dedicated breakout sessions. OEUK's operations manager Keith Wise opened the session with an overview of the southern North Sea (SNS) opportunity base covering both exploration and production (E&P) and carbon capture and storage (CCS).

PGS' Bernard Caselitz (*right*) dived deep into the new SNS Vision data map, explaining its application for successful exploration, infrastructure-

led exploration and CCS prospecting. There were over 30 industry geoscience experts in attendance, split between E&P licensees and specialists in CCS. The event followed the equally popular workshop devoted to Faroes-Shetland Basin data interpretation.



## NSTA wins digital prizes

The North Sea Transition Authority won two prizes at Computing UK Digital Technology Leader Awards, it said in an August 9 press release. These included the Best Public Sector Digital Project for the Digital Energy Platform. The NSTA's John Seabourn won the award as the best digital officer.

The Digital Energy Platform boasts a selection of impressive tools, including the National Data Repository (NDR), open data site, data and insights centre and Energy Portal, which have transformed the availability of accessible data.

Through the platform, organisations can undertake spatial and subsurface mapping to accommodate and integrate a range of technologies offshore – such as carbon storage, hydrogen, wind and oil and gas – and unlock the value of data.

## Harbour Energy secures early Wintershall Dea takeover

Harbour Energy completed its \$11.2bn takeover of Germany's Wintershall Dea September 4. This was sooner than the forecast of "fourth quarter" when it announced the deal last December.

Production now totals 500,00 barrels/day of oil equivalent from ten countries. Also into the mix will go Wintershall Dea's carbon storage assets. Excluded from the deal are some assets in Russia and Libya and major gas pipelines in Europe.

Harbour CEO Linda Z Cook said the acquisition would "transform the scale, geographical diversity and longevity of our portfolio and strengthen our capital structure enabling us to deliver enhanced shareholder returns over the long run while also positioning us

for further opportunities." In the UK its strategic investment opportunity in the Viking carbon capture and storage offshore east England is progressing through front-end engineering and design.

Next year's free cash flow is expected to be significantly higher than this year's, reflecting similar levels of production and operating costs but materially lower capital expenditure.

News of the planned takeover followed the announcement of the Energy Profits Levy. It has cut earnings for UK oil and gas producers, many of which do not have global energy trading businesses in low-tax regimes and who also have to absorb the higher costs of decarbonisation.

## Orcadian farms into Fynn

Orcadian Energy has farmed into a 50% stake of Fynn, the Parkmead-operated heavy oil field, it said mid-August. The announcement followed the 33rd licence round where it also won the licence to develop gas resources.

Parkmead said Fynn had oil-in-place of between 740mn and 1.3bn barrels. It said it was "an important award because the acreage which encapsulates this significant oil field has not previously been licensed to a single partner group, creating an exciting opportunity for Parkmead and Orcadian to advance the development of this substantial, previously untapped resource."

Orcadian said its "viscous oil projects will all benefit from our expertise in the application of polymer flood technology. A combination of geothermal heat and polymer could unlock the Fynn development which is a project of the same scale as Rosebank."

As operator, Equinor took final investment decision on Rosebank last year.

## Heavy oil, gas 'key to transition'

The Fynn reservoir's long-chain hydrocarbons are good feedstock for lubricants, asphalt and anode grade petroleum coke.

This is an essential component for fast charge batteries for electric vehicles. Orcadian believes that gas and viscous oils will be the post-transition hydrocarbons essential to the prosperity of every economy.

"Producing heavy oil domestically, under the stewardship of the North Sea Transition Authority, is a considerably better option than importing these oils from Venezuela or Canada," Orcadian said. A polymer flood approach as is planned for Fynn causes less emissions per barrel than most UK light oil fields.

"The UK and her allies need viscous oils both for strategic security of energy and for the petroleum-derived products that support both the transition and the post-transition economy," it said. Imports by contrast damage the balance of payments, eliminate great jobs, and increase actual greenhouse emissions," Orcadian said.

## NSTA comes down on decom delays

The North Sea Transition Authority (NSTA) says that operators are decommissioning wells too slowly. The consequences include depriving the supply chain of work and allowing costs to spiral, the regulator said. These costs are borne by taxpayers since decommissioning is a legitimate expense for tax purposes.

The facts are laid out in the agency's latest *Decommissioning Cost and Performance Update*, which is planning to take a harder line on operators who do not meet their regulatory obligations on well decommissioning.

The NSTA has begun investigating alleged failures to complete timely plugging and abandonment in line with approved plans. This is the most expensive part of decommissioning but delays can mean further emissions of greenhouse gases.

Operators must leave the marine environment clean and safe once they stop producing, and are legally required to decommission their platforms, pipelines and wells.

This is a complex and expensive process which requires thorough preparation and planning.

Industry's ability to share knowledge, learn lessons and produce robust plans helped lower the decommissioning cost estimate by £15bn between 2017 and 2022, reducing the cost of tax reliefs to the exchequer. However, further improvements have been difficult to achieve as much of the low-hanging fruit has been picked.

Operators spent around £2bn on decommissioning last year, which was in line with forecasts, but they completed much less work than originally planned.

They only achieved 70% of planned well decommissioning activities last year.

OEUK's annual conference on decommissioning will be in November, when its report will be published.

## OEUK comments on using rigs as marine habitat

While leaving rigs in the ground might be the best option, it is not necessarily the cheapest way to decommission them, listeners of BBC 4's Rare Earth programme (June 28) learned.

There is a growing body of evidence that old platforms can become valuable marine habitat for rare coral or fish colonies.

But OEUK's decommissioning head Ricky Thomson said leaving old infrastructure in place was not the cheap option that many people imagine it to be: consultations can involve hundreds of stakeholders.

And any modifications made to the structures left behind would still be very costly, owing to the environment.

He said the presumption of complete removal should remain the default option, but that decommissioning should be planned on a case-by-case

basis to include the possibility of leaving some elements of disused installations in place because of their ability to create new ecosystems.

Other contributors included Dr Alethea Madgett, a marine biologist from Aberdeen University's National Decommissioning Centre; and Andy Jacks, operations director at Able UK's decommissioning base on Teesside. Able UK is decommissioning the 30,000-tonne Gullfaks C platform.

The programme discussed information provided by OEUK about wind turbines. Unlike early oil and gas platforms, new wind turbines are being designed with decommissioning and recycling in mind. OEUK's guidelines on decommissioning the existing fleet of wind turbines will be published in November, at the time of the annual decommissioning conference in Fife.

## NSTA calls for better ESG disclosure

The NSTA says that UK continental shelf licensees could improve their ratings from the environmental, social and governance (ESG) perspective if they were more transparent.

The offshore regulator said: "ESG reporting is no longer a 'nice to have' extra, it is crucial to attracting and maintaining investment. The principle of 'No ESG disclosure, no access to finance' is truer now than ever before."

Its July report says many of the 29 licensees follow good practice. More than half link executive's variable pay with key ESG performance indicators, such as emissions reduction. But more companies should do this. And most (62%) are publishing ESG data in easy to find, central locations on their websites.

New regulatory standards issued by the International Sustainability Standards Board and requirements under the Corporate Sustainability Reporting Directive also help improve the consistency and transparency of ESG reports. Its new ESG Disclosure

Report recommends ways to ensure progress continues, including fostering closer links between ESG teams and management and more openness about energy transition investments.

Environmental concerns underlie the sector's ESG reporting. But not all companies use a standard approach to ensure they are sharing enough of the right information, says the NSTA.

Licensees performed well on human-resources-related areas, such as diversity and inclusion, health and safety and training. And they are submitting data about their supply chain such as payment terms and local content to the NSTA.

But they would enhance the quality of their ESG disclosure if they put this information in the public domain too, it says. Payments to governments and political donations should also be more transparent.

See p14 for a review of *The Global ESG Handbook: a guide for practitioners*, published by Globe Law and Business.

## Bird populations and rigs as habitat

*Eni's senior environmental advisor Magda Kos describes how the Italian company looks after kittiwakes*

The black-legged kittiwake (*Rissa tridactyla*), a species protected in UK offshore waters, has become accustomed to nesting at some oil and gas infrastructure. As these assets reach decommissioning stage, a challenge arises: the ideal operational window for removing them overlaps with the birds' nesting season, during which it is illegal to disturb the birds. This potentially restricts major decommissioning operations to winter months, with the greater safety and cost challenges that that presents. The UK arm of the Italian energy major Eni is among the first operators to tackle this.

### Kittiwake management plan

Eni implemented a comprehensive bird management plan to monitor, research and test deterrents. These included sonic net, falconry, acoustics and visual decoys at its Liverpool Bay Assets (LBA). Eni's aim was to find how to minimise the impact on the local kittiwake population in the East Irish Sea when it removed its infrastructure.

### Nesting deterrents

Eni was open to innovative solutions: in 2023, in co-operation with the University of Exeter and RSK Biocensus, Eni tested a new deterrent at its Douglas platform in Liverpool Bay: a sonic net. It was the first project of this scale in the UKCS and the first time this method had been tested on kittiwakes. It involved introducing modified, pre-recorded bird sounds at specific frequencies, to mask their social calls, creating an environment that they perceived as risky. But the sonic net did not live up to its initial promise: as a means of reducing the chances of nesting it was inadequate.

Research results on kittiwake colonies nesting on offshore platforms are not publicly available. To understand the colonies present at its assets, Eni has been collecting phenology – data on seasonal behavioural variations – and breeding success data since 2023. The complete dataset will contribute to a published report, part of the University of Exeter's research programme.

Bird counts alone cannot determine the effectiveness of deterrents, because an observed decrease in population numbers may have several causes and isolating the main one is difficult.

### Ringing and tagging

Following the Joint Nature Conservation Committee's methodology, Eni organised boat-based surveys. These show a slight annual increase in bird nest numbers, which could have several causes: site fidelity, where birds return to their birth-site; unavailability of their first-choice location, because it had already been decommissioned; or because deterrents used there were truly successful.

Eni organised a ringing and tagging project, co-executed with the University of Exeter and RSK Biocensus, to get to the bottom of this. Eni is collecting data for the University of Aberdeen and is ready to share the data with the wider academic community.

Tagging data (GPS by GSM and UHF) will shine a light on phenology, help to define the birds' feeding areas and measure the duration and distances of their trips. It will also inform the discussion on how to manage kittiwake populations.

Each of the kittiwakes was fitted with a ring identifying the platform where it was caught. Ringing the birds enables the recording of re-sightings. This will contribute to the understanding of the choices the birds make after displacement from their nesting site, whether because the Liverpool Bay assets have been decommissioned or because the birds have been successfully deterred. It will also help understanding the connectivity of offshore and onshore populations; their migration corridors; and confirmation of their offshore site fidelity.

### Summary

Information collected will help Eni to make science-based decisions about deterrent measures. It will optimise decommissioning operations, helping to strike the right balance between safety, animal welfare and cost. Science will benefit from knowing more about kittiwakes. Last, the wider energy industry will be able to produce better bird management plans.



## Oil and gas industry 'vital for prosperity'

*OPEC's secretary-general Haitham Al Ghais on the sector's social and economic benefits*

The oil and gas industry recruits highly skilled and specialised workers and it has significant multiplier benefits, oil cartel OPEC said in an article on its website in late April.

Secretary-General Haitham Al Ghais said the sector generated opportunities for a wide range of businesses beyond the immediate circle of oil and gas producers.

"Scattered throughout the world are regions, towns, villages and communities, where the oil industry is the main employer, the driver of economic opportunity, a home to rigs, refineries and petroleum universities, and a source of civic and local pride. 'Oil towns' exist on every corner of the globe, for example, Midland, Texas; Aberdeen, Scotland; Dhahran, Saudi Arabia; Port Harcourt, Nigeria; and Ahmadi in my home country of Kuwait, to name a few.

"Thus, it is concerning that we hear about a 'hiring crisis' facing the industry with the younger generation put off from a career in it and universities offering fewer petroleum related subjects," he said.

In the 2023 update to its Net Zero Roadmap, the International Energy Agency (IEA) foresees 13mn jobs lost in fossil fuel-related industries between 2022 and 2030. That equates to roughly 4,500 a day. On the other hand, only a small proportion will find work in other energy sectors.

Almost a year before the IEA first launched its Net Zero Emissions (NZE) Scenario in 2021, its executive director Fatih Birol said in an interview with Turkish Anadolu Agency that there are millions around the world who work in oil and oil-related sectors and these are also strong pillars for the world economy. "If these industries collapse, they will have a negative impact on the global economy as well," he said.

Moreover, the impact of mass redundancies or the shutting of certain industries can affect societal harmony too. Communities have often struggled to rebuild following the closure of an industry that had been a region's major employer.

OPEC's view though is that the world will need more, not fewer, jobs in this vital sector. "We foresee oil demand growing to 116mn b/d by 2045 and to meet this, and further evolve technologies to reduce emissions, we will need more workers.

"To all workers in the oil industry across the globe, on behalf of OPEC, I thank you for your contribution to delivering this vital commodity and the products derived from it to billions of people worldwide.

"And finally, to all jobseekers – of all generations I encourage you to consider a career in the oil industry. It is one of boundless opportunity for professional fulfilment and a vital cog in providing energy to the world."

## UK 'needs long-term strategy for engineers': report

In a June 7 blog, the National Engineering Policy Centre called on the next government to commit to a long-term industrial strategy for the UK that draws on its strength in engineering, innovation, research and manufacturing.

"Engineers are drivers of innovation and economic opportunity," said Professor Sir Jim McDonald GBE FREng FRSE, president of the Royal Academy of Engineering.

"They leverage advances in research to develop and deliver new products, services and enterprises that generate jobs and value to society. More than 8mn people work in the UK's engineering economy and the profession generates up to an estimated £645bn gross value added to the economy annually.

"For the UK to leverage that impressive engineering and technological strength, the new government needs to pursue a clear industrial strategy, underpinned by large-scale targeted support to key sectors, as many of our competitor nations have succeeded in doing.

"The choice is clear: we must create an environment that supports companies here, or they will go elsewhere."

Engineering posts comprise nearly a fifth of jobs nationally, and 32% of economic output. In a report 'Engineering a resilient and prosperous future,' published a few weeks

before the general election, it asked for fixed targets to cut carbon emissions, incentivise demand reduction, technology development and adoption and a just transition.

Specifically, it called for a National Engineering and Technology Workforce Strategy and a long-term, holistic plan encompassing all education stages, reskilling and upskilling, to deliver a diverse engineering and technology profession with the skills needed for the future.

The chair of the newly-devised Great British Energy and former Siemens UK head Juergen Maier commented: "A new parliament is an opportunity for government to set long-term policy priorities, the most important of which is the creation of a much-needed Industrial Strategy that sticks. The direction and certainty this sets allows for the investment in people, processes and infrastructure needed to truly harnesses the UK's strengths in engineering. For too long plans have come and gone, undermining the sector's ability to grow and develop in the UK."

The body called for a redoubling of the commitment to net zero and to accelerate the development and adoption of green technologies "by driving action and instilling confidence through fixed targets to cut carbon emissions, incentivising demand reduction and technology development."

## Industry calls for better EC regulation

- Europe's feedstock prices are uncompetitive
- Energy security now a priority

The first informal meeting of the European Union's Competitiveness Council under the Hungarian presidency of the Council of the European Union took place at the headquarters of MOL, the national oil company. Speakers said that the bloc suffered from excessive regulation and targets, with Marco Mensink, director-general of the European Chemical Industry Council (CEFIC), representing EU industry.

Russia's invasion of Ukraine and subsequent sanctions on its energy exports have strangled the continent's gas supply while decarbonising industry means that the feedstock will be more expensive. Electricity prices have also risen for related reasons. Conversely industry in the US can access the cheapest unsubsidised gas in the world, putting the EU at a competitive disadvantage.

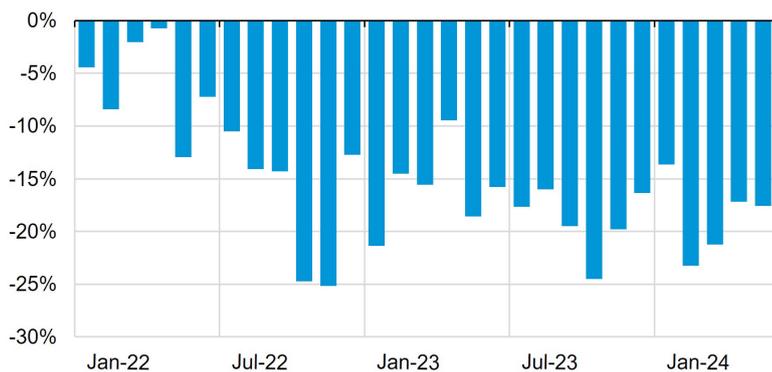
But the success of the transition depends on regulatory certainty, reduced administrative burden, an open approach to all cost-efficient sustainable technologies and options for de-risking innovative projects.

To lighten the burden on energy-intensive industries, more funding was needed. This could include dedicating revenues from the Emissions Trading Scheme to the industrial transformation of the affected sectors.

"It is in all of our interests that Europe remains strong and competitive. The 'Fit for 55' climate package is a great vision, but Europe actually needs a 'Fit for Reality' plan to tackle real-world challenges," said MOL supervisory board chairman Zoltan Aldott. He said MOL had invested in the green energy transition, but it needed a supportive environment. "It is crucial for us as MOL Group not only complies with the EU's green targets but plays an important role in ensuring energy security in the central and east European region," he said. MOL is working on decarbonisation through green hydrogen, biogas, carbon capture and storage and various synthetic and biofuels, waste management, and plastic recycling, as well as petrochemicals needed to produce everyday products.

Concerns about the continent's competitiveness were highlighted earlier this year in February by European industrial stakeholders: 73 leaders from nearly 20 industries issued a joint declaration, known as the "Antwerp Declaration," to Belgium's prime minister Alexander De Croo, then-president of the European Council, and Ursula von der Leyen, the newly-re-elected president of the EC. The declaration stated that a successful green energy transition hinges on competitiveness. Now the task is to establish a consensus to support future decision-making.

### EU-27 monthly gas demand cut vs 2017-2121 average



Source: US EIA

## Energy UK calls for EU reset for the climate

The new Labour government has made clear its desire to reset the UK's relationship with the European Union (EU).

A report by the downstream industry group Energy UK says that despite years of acrimony, the UK and the EU remain deeply interconnected and nowhere is this more true than when it comes to energy and climate change. The new government offers a good chance of restoring matters, it said.

The benefits are substantial. From collaboration on clean energy projects that bolster energy security across Northern Europe to working more closely on the shared challenge of carbon leakage, co-operation will enable both sides to reach net zero emissions more quickly and at a lower cost.

At the height of the crisis, the UK was acting as an energy bridge to Europe, helping to maintain security of supply. More than a quarter of Europe's lost Russian energy was replaced by UK gas exports. These were over five times higher in summer 2022 than summer 2021, and electricity exports were more than seven times higher.

Assuming the additional electricity was generated from gas, the growth in UK electricity and gas exports in summer 2022 replaced the equivalent of 27% of the lost Russian gas.

And when much of the French nuclear fleet was offline owing to maintenance and industrial action, the UK responded with record-high electricity exports to France. In July 2022, the French nuclear fleet was 12-24 GW short of the typical summer range.

The day-to-day operation of a net zero energy system means even more reliance on each other. Capitalising on an energy system driven by renewables means enabling efficient electricity trading, which could open up the potential of the North Sea to support a complex web of interconnected clean energy projects.

Linking the UK and the EU Emissions Trading Systems will also incentivise investment in clean technologies: a larger, more efficient market with enhanced abatement opportunities will allow cheaper decarbonisation.

Market linkage could also cut the EU's gas imports. More fossil fuel generation has offset lower renewables imports from the UK, an unintended consequence of the Carbon Border Adjustment Mechanism design.

## Norwegian pragmatism breeds CCS success: report

- Supportive government was quick to recognise the importance of sequestration
- State equity involvement helped to smoothe the way

Norway's heavy economic reliance on its oil and gas exports incentivised its government to take the lead in developing its carbon capture and storage (CCS) projects, according to a report by the Oxford Institute of Energy Studies.

While the UK government vacillated – as late as 2015 it cancelled a £1bn CCS competition and is only now working out a viable set of contracts – Norway has been developing and trialling a number of reservoirs and aquifers for a variety of purposes, including decarbonised gas production (Sleipner) and third-party storage (Longboat).

Oil and gas production is one of the biggest sources of Norway's greenhouse gases (GHG), with some 12mn tonnes CO<sub>2</sub>e emitted in 2022 – roughly a quarter of Norway's total. Failing to adapt the crucial hydrocarbon sector to ambitious climate targets might mean a heavy loss in output and hence gross domestic product, says the report.

Norway's introduction of a carbon tax in 1991 was a pioneering approach to reducing climate change and could be seen as the midwife for its CCS industry. It was a part of Norway's inaugural climate policy, which said GHG emissions were to be “stabilised at 1989 levels by the year 2000” and that Norway would lead by example in mitigation action. Reinjecting CO<sub>2</sub> into the Sleipner and Snøhvit gas fields was the result, demonstrating the feasibility of safe CCS and building public trust.

### CCGTs also drove demand

Another factor propelling Norway's CCS was the need for natural gas-fired power plants. During the 1990s and early 2000s, the power industry faced significant opposition from environmental groups defending the country's climate obligations. CCS emerged as a potential solution to this dilemma and received broad political

support from government and industry. CCS was perceived as a “technological glue” offering the promise of “CO<sub>2</sub>-free” power generation.

The CCS Strategy was published in 2014. It underlined the importance of CCS technology for industry, power plants and cement factories.

In response, Norway aimed to develop large-scale CCS projects, including a full-chain capture, transportation, and offshore storage project – Longship. The strategy also called for international collaboration and knowledge sharing to accelerate the deployment of CCS technology globally. Because it was the first of its kind, the project faced higher uncertainties than others. So industrial partners sought cost-sharing mechanisms to cover capex and opex.

Northern Lights has identified a business case for CO<sub>2</sub> transport and storage, with the state aid agreement incentivising dialogue with potential customers across northern Europe, and where future profits would be based on tariffs paid by potential new customers.

Government funding means industrial partners must adhere to the Law on Public Procurement.

### Carbon export treaty exemption

One problem that Norway has overcome in order to import CO<sub>2</sub> has been the London Protocol. This treaty bans the export of waste products but it makes exception for CO<sub>2</sub> for disposal if “an agreement or arrangement” has been entered into by the countries concerned. and that all the Protocol's other protection standards and requirements have been met.

Norway has been active in getting initial agreements in place. The country has a robust commitment to climate change mitigation and a good record with CCS projects. CCS has a role in reducing greenhouse gas emissions while maintaining industrial productivity.

## UK needs a CCS plan: NAO

The UK government does not have, and is currently not developing, a credible alternative pathway to net zero emissions by 2050 without relying on carbon capture and storage (CCS). The deadline is embedded in the UN's Paris Agreement.

There have been failed competitions to kick-start such projects in the past, which might have produced an operational scheme in Scotland.

In this context, it is critical that the Department for Energy Security and Net Zero (DESNZ) succeeds with its plans if the UK is to achieve its legally binding climate ambitions, says the National Audit Office in a late July report.

It says DESNZ's approach brings new complexities to be managed, depending on parallel, interdependent negotiations with projects across different technologies.

Completing negotiations to support the Track-1 projects will be a very significant milestone and the government might have to accept that not all the risks can be fully mitigated. But paying more to support early projects could be a risk worth taking if the alternatives are even more costly and similarly delayed.

Defining and agreeing the allocation of risk between government and private investors, as well as between companies involved within projects (for example, between carbon emitters and transport and storage companies) will be essential. Individual projects need to be operational at the same time for the programme to be successful, meaning a lot of moving parts need careful co-ordination.

The government has so far spent £630mn on CCS, primarily through grants to support the early development of projects. Some final investment decisions are expected later this year.

## Hydrogen exports 'in some form' to Germany feasible by 2030

- Ammonia is one possibility but financing is outstanding
- Gas specifications a minor challenge for EU grid operators

A new report published by Aberdeen's Net Zero Technology Centre sees good reason to expect Scotland to export hydrogen in some form – liquefied, ammonia or other – to Germany later this decade.

Written by British and German contributors it says that there is a range of options at either side of the North Sea suitable, and would support the UK-German agreement on co-operation in hydrogen trade.

There are the usual caveats: project funding and uncertainty on offtake options are obstacles at the production side. Favourable business models for hydrogen exploration and clarity on plans for infrastructure development will be important in supporting decision making and accelerating the establishment of these early-stage initiatives, it says.

### Chicken or egg

A third of planned projects are in the early stages of development. The owners do not know when production will start, how much, or how they will take it to market.

Pure hydrogen can be transported either as compressed gas or as cryogenic liquid; or it may be converted into a derivative form such as ammonia, synthetic natural gas or liquefied organic hydrogen..

Salt caverns are the only proven form of geological storage for hydrogen, although Centrica is working on converting the depleted Rough field into a hydrogen facility (see p22).

In Teesside, a plant with three small caverns has been in operation for over 50 years. There are none in Scotland but there are several points from which the hydrogen may be exported: Sullom Voe, Flotta, Stornoway, Cromarty Firth, St Fergus and Grangemouth/Hound Point.

### Keeping it cool

Transporting liquid hydrogen is challenging because it needs to be kept at -253 °C. LNG by contrast is just -162 °C.

While the onshore technology and transport options on land by truck and for rather short distances are very well developed, large LH<sub>2</sub> vessels and the corresponding import terminal development need to overcome some technological challenges. These make seaborne imports before 2030 unlikely.

Across the North Sea, German transmission system operators (TSOs) have a maximum blending limit of 2 Vol.-% before running up against any obstacles. Although the TSOs consider higher admixture proportions to be possible in the future, as it stands, the proportion of hydrogen in transmission system cannot be guaranteed. This is not suitable for burners which need a constant gas quality.

Gas distribution networks in Germany however could handle up to 20 Vol.-% and different gas networks could exist in parallel: pure hydrogen networks, methane networks and blended gas networks. Blending in the distribution

grid could accelerate the ramp-up of decentralised hydrogen production.

Germany could assimilate the full capacity of Scotland's green hydrogen supply. Fundamental analysis of the anticipated availability and technical maturity of five supply chains shows the preferred options for different time frames.

### Scotland's political support

As a critical component of decarbonisation strategies, hydrogen production in Scotland is expected to develop at a fast pace. The Scottish government has set targets of 5 GW installed low-carbon hydrogen capacity by 2030, growing to 25 GW by 2045.

These targets can be met, but business models are needed to accelerate the development of transport and storage infrastructure, supply chains and skills and attract further investment.

Green hydrogen production clusters are likely to be formed near ScotWind wind farm development sites and there is also significant potential for the production of alternative clean fuels in INTOG regions.

### UK the 'natural supplier' of hydrogen to the EU: Arup

Belgium, the Netherlands and Germany are leading the development of low carbon hydrogen in mainland Europe. A new report by engineers Arup says these would make good markets for UK exports by pipeline, given the large demand from industry there. Bacton, Isle of Grain (Medway), Easington, Teesside and St Fergus were all considered as export points for the purposes of the study.

The EU has an import target of 10mn tonnes/yr (395 TWh/yr) of hydrogen by 2030, which outstrips all projections on the quantity that will actually be available by then, so competition on price is unlikely. The UK could be in a strong position, as research by the International Energy Agency has shown that its production costs could be some of the lowest in Europe. Facilitating export solutions might also improve energy security at either end of the pipeline.

Exports will depend on production certification and a joined-up production and export strategy, however. The carbon intensity of hydrogen production, whether CCUS or electrolytic enabled hydrogen, also would need to be considered if exported, the report says.

## Global flaring, intensity rise: World Bank

After a “welcome reduction” in 2022, global gas flare volumes rose 9bn m<sup>3</sup> (7%) to an estimated 148bn m<sup>3</sup> in 2023, the World Bank said in its June report. This volume takes the world back to 2019 – the year before the Covid epidemic when Russia exported that much gas to Europe and Turkey.

World oil production by contrast rose just 1%, meaning the average flaring intensity (m<sup>3</sup>/b) rose 5%.

The top nine countries accounted for around three quarters of all gas flared and 46% of global oil production. Most are non-OECD countries and they are pursuing very different agendas from the United Nations and those working on its framework convention on climate change (UNFCCC).

This surge makes the planned end-date of routine flaring – 2030 – look unrealistic. Iran, Russia and Libya all saw big rises in volumes flared and also in intensity as oil output was proportionally lower. The rising intensity suggests a lack of gas infrastructure and use to cope with the extra produced as oil output rises.

Some of the other six of the top nine by volume are also problematic for one reason or another: Iraq, the US, Venezuela, Algeria, Nigeria and Mexico. But the carbon intensity varies widely: the US is among the least polluting from that perspective, despite an 11% increase in intensity. This might have been a coincidence caused by a mix of hot weather, unreliable infrastructure and maintenance of gas-gathering systems where oil is targeted.

On the other hand, Algeria saw the biggest reduction in both volume and intensity: the latter metric has fallen since 2021, when it was on par with 2019. And more gas recovery projects are on the way.

The WB says that since oil and gas will “continue to play a material role in the global energy system until at least 2050,” operators must ensure that they are produced as cleanly as possible during the energy transition.

### Flaring intensity and importers

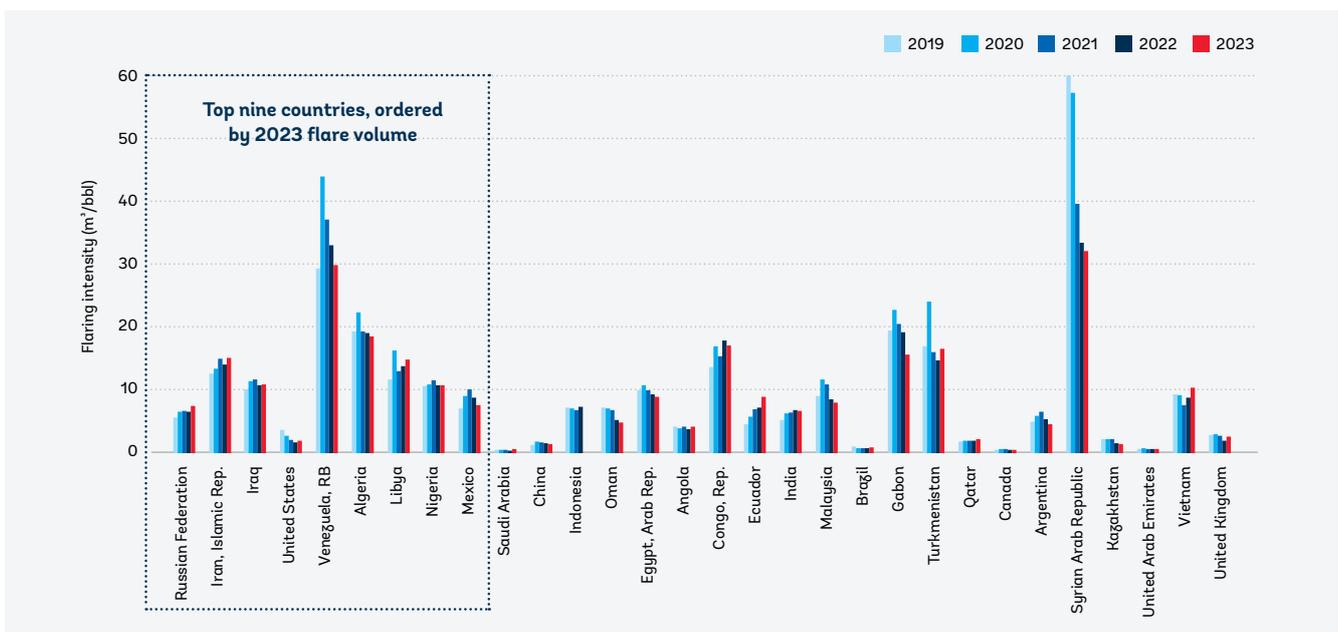
The WB has also created an Imported Flare Gas (IFG) Index which shows

how countries importing crude oil are exposed to gas flaring.

Preliminary results from the IFG Index show that many large crude oil-importing developed countries are sourcing their oil from countries that flare large volumes of associated gas. The IFG Index aims to quantify the concept that if a country is importing crude, then it is also importing the flaring intensity of those producing countries in proportion to the amount of their crude oil it has imported.

The WB does say that there is some room for doubt with its calculations, where they are based on assumptions. Using the conventional assumption that 98% of flared gas is combusted and assuming that flares are lit at all times, the volume of gas flared globally during 2023 resulted in 381mn tonnes CO<sub>2</sub>e, comprising 336mn tonnes CO<sub>2</sub> and 45mn tonnes of other gases converted into CO<sub>2</sub> for the sums to be consistent. But the reality could be very different: if the effective combustion efficiency is just 94%, methane emissions would be triple the conventional estimates.

Figure 31. Flaring intensity in the top 30 flaring countries from 2019 to 2023, with the top 9 flaring countries indicated



Source: Payne Institute and Colorado School of Mines, NOAA, EIA, and World Bank

## Statistical Review 2024: energy demand, emissions rise

- Renewable energy growing fast but not eroding demand for fossil fuels
- US production of gas keeps up with falling European demand

Last year saw global energy supply rise to meet healthier demand, according to the Energy Institute’s flagship annual report on global energy.

The 2024 edition of the Statistical Review of World Energy has exposed some awkward realities about the possible success of the planned drift to net zero emissions later this century.

Oil demand bounced back in 2023, largely owing to China relaxing its zero-Covid lockdown policies. It broke through the 100mn barrels/day mark for the first time ever and averaged 96mn b/d, a record.

US output rose 8%, according to the review. Although Brent crude oil prices fell 18% to average \$83/b in 2023, they were still some 29% above pre-Covid levels.

### Another record for coal

Coal demand also beat the previous year’s record level. While China is by far the largest consumer of coal – it beat its own record set in 2022 and now accounts for 56% of the world’s total demand – in 2023 India used more coal than Europe and North America

combined for the first time ever.

Coal in both regions fell below 10 EJ each and has been in constant decline over the past 10 years.

In power generation, coal retained its position as the dominant fuel in 2023 with a stable share around 35%. Natural gas’ share of the generation fleet also remained stable at around 23%.

### Powergen goes up

Electricity generation rose 2.5% to reach a record level of 29,925 TWh. Asia Pacific and the Middle East saw growth of around 5% while demand in both Europe and North America fell by 2.4% and 1% respectively.

Renewable energy grew at six times the rate of total primary energy and electricity demand grew 25% faster than total primary energy demand which was up 2% on 2022.

Renewables’ share of total primary energy demand reached 14.6%, an increase of 0.4% over the previous year.

Europe installed just over 56 GW of solar, a sixth of total such additions. Wind achieved a record year for new build with over 115 GW coming online.

Nearly 66% of capacity additions were in China and its total installed capacity is now equal to North America and Europe combined.

Europe now has the highest share of offshore in its wind portfolio (12%). Together with nuclear, they represented over 18% of total primary energy demand. Fossil fuel demand as a percentage of primary energy dropped 0.4% to 81.5%, showing that much of the new build of renewables has been at best incremental, rather than eating into the demand for energy supplied by hydrocarbons.

In consequence, greenhouse gas emissions from energy use, industrial processes, flaring and methane – in CO<sub>2</sub>-equivalent terms – increased 2.1% to exceed the record level set in 2022.

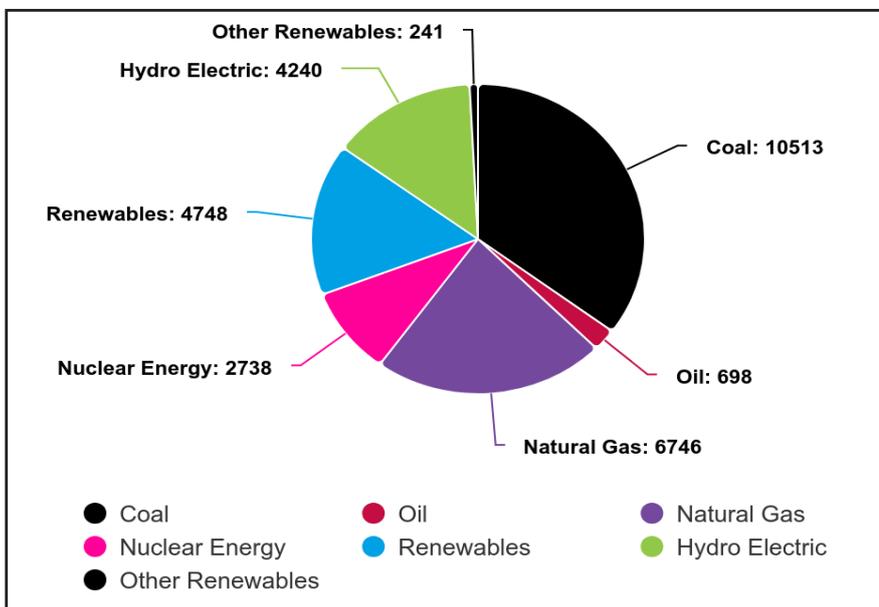
For the first time ever, energy-related emissions exceeded 40 GtCO<sub>2</sub>e, with the direct use of energy breaching 35 GtCO<sub>2</sub>e for the first time. CO<sub>2</sub> emissions from flaring increased by 7% along with emissions from methane and industrial processes.

### Natural gas demand stable

Average natural gas prices in Europe and Asia fell 30% from their record highs recorded in 2022, averaging around \$13/mn Btu. US Henry Hub prices fell even more to average \$2.5/mn Btu across the year, back to where they were in 2019 (pre-Covid) This is despite the upward trend in US exports of LNG.

The US remains the largest producer of gas, overtaking Qatar with a 10% output increase, delivering around a quarter of the world’s supply. Russian gas output fell 5%, or 32bn m<sup>3</sup>, with LNG exports dropping 2% (0.8bn m<sup>3</sup>) and pipeline supplies dropping around 24% (30bn m<sup>3</sup>). China was again the world’s largest LNG importer followed by Japan and South Korea. Together, they accounted for around 45% of global LNG trade. Natural gas pipeline net trade fell by around 8% (or 35bn m<sup>3</sup>) in 2023.

How the world generated its electricity in 2023 (Exajoules)



## The Global ESG Handbook: a guide for practitioners

- Differing definitions of terms causes confusion
- The law of unintended consequences comes into play

Regulation, enforced through the law courts – at least in OECD countries – has always played a big part in minimising the physical risks of industrial energy production in western societies.

Accidents are penalised and sometimes followed by new regulations; new laws such as corporate manslaughter are drafted. But business goes on: there are simply no alternatives to oil, gas and coal.

So far, so pragmatic. But what to do when plaintiffs claim to represent the global climate? Or can it make sense to ban new US LNG terminals if Asia ends up importing more coal?

This is some of the background to a thought-provoking book on environmental, social and governance (ESG) considerations, published by Globe Law & Business: *The Global ESG Handbook*.

It explores the challenges that ESG poses; the new varieties of litigation; and the directions in which ESG principles may develop further. The pluses of standardisation and common goals sit oddly with the minuses of sloping playing fields on the international arena and barriers to entry for smaller players.

Written and edited by major law firms and environmentalists, it surveys ESG from different perspectives, including:

- Global supply chains and the relationship between supply chains and human rights;
- Energy transition and climate issues;
- Financial regulation, the exploration of the best practices and the benefits and challenges of ESG financing;
- Corporate issues including mergers and acquisitions and shareholder activism;
- ESG in private equity; and
- Technology in ESG reporting.

### Shareholder rights

A major change in recent years is the argument that corporations must

now serve all citizens, not just their shareholders, as they go about their business.

The case that Mileudéfense brought against Shell in the Netherlands falls into this category, although Shell has continued investing upstream, meeting society's demand for affordable oil and gas – not to mention its duty towards its own shareholders to keep earning money for them.

Unsurprisingly there is push-back against this balancing act: it represents a moral hazard, given the context in which companies operate. Giant companies – often state-owned – may operate with different objectives and legal frameworks. For them, the supply window has just been opened a little wider as western banks come under pressure to divest from oil and gas.

Some companies' fear of seeming out touch has led to the relatively new business of 'greenwashing.' But thanks to successful litigation, several UK companies have dropped advertising campaigns based on inaccurate claims of pro-environmental behaviour. The Advertising Standards Authority has also released guidance on this.

Conversely, some African countries have sincerely embraced ESG principles as a means to securing finance for the numerous energy projects they will need to build to enable economic growth and attract foreign investors without consuming yet more coal.

But the pace of change is far from uniform: some countries in Asia for instance have less rigorous mandatory norms related to sustainability. And South Korea plans to keep ESG disclosure voluntary until at least 2025, the authors of that chapter write.

Geopolitics has become another driver for ESG: "Both the war in Ukraine and the Israeli-Palestinian conflict did and have the potential to profoundly



destabilise fossil fuel supply and prices. It is a stark reminder that fossil fuels are the Achilles heel for many economies that make the upscaling of renewable alternatives more desirable."

In the west, private equity firms, marshalled by regulators, have been seeking advantages from sustainable and responsible investments. Drones for the monitoring of methane emissions are one such positive outcome.

And sometimes the switch from fossil fuels only creates new dependencies elsewhere. China is already not only a major supplier of solar panels and electric vehicle battery components; it also accounts for 60% of the global production and 85% of the processing capacity of critical minerals, it says.

All movement implies friction: acting against the ESG agenda is the likelihood that many societies will prefer cheaper energy where the alternative is more expensive and cleaner – a problem facing western societies now.

"Complex trade-offs involving global equity and energy security have fuelled scepticism as to the efficacy and merit and value of ESG as a concept," it says.

Unsurprisingly, "developing and delivering a climate strategy that connects climate goals with broader business objectives is the step that companies most struggle with on their journey towards net zero. "In many cases, aligning the two might require entirely reimagining the business model," writes the author.

*Readers are invited to take advantage of Globe Law and Business' offer of a 15% discount on any copies purchased. Please quote SO2024 at the checkout. (£126.65, 286 pp, hb. ISBN 978-1-787429-76-5).*

# Member News

## M&A

### Viaro Energy buys Shell Expro's SNS assets

London-based independent upstream company Viaro Energy is to buy a major set of UK gas assets from Shell Expro, the upstream joint venture company that is also owned by ExxonMobil, it said in late July. It will also become an operator for the first time, through its subsidiary Rock Rose. The assets include one of the largest and oldest portfolios in the UKCS and the Bacton beach terminal into which all the gas flows via the Leman and Clipper fields.

The portfolio produced 28,000 barrels of oil equivalent/day in 2023, or 5% of UK's total, which more than doubles Viaro's producing portfolio of 25,000 boe/d and reaffirms long-term commitment to the UKCS.

Pending regulatory approval, Viaro will own 100% of ten producing fields, an 83.2% stake in another producing asset and 50% interest in an exploration field, as well as related pipeline assets. In 2023, production was around 28,000 boe/d and the assets can grow with near-field exploration.

The fields are: Barque, Brigantine, Caravel, Carrack, Clipper, Corvette, Cutter, Galleon, Leman, Shamrock (all 100%), Skiff (83%) and Selene exploration prospect (50%). ExxonMobil is a JV partner in all assets with the exception of Shamrock and Selene.

Prospects include the tight gas development ongoing in the Galleon and Barque fields and the Greater Sole Pit area, "both indicative of the fields' lasting importance for the UK's energy security." No value was given for the deal, for which the major US energy law firm Bracewell was Viaro's legal advisor. Lawyer Darren Spalding said the deal gave Viaro Energy "a great opportunity to invest and bring new life to these significant assets. The acquisition of the Bacton gas processing terminal also gives Viaro Energy the potential to play an important role in the deployment of clean technologies, such as carbon capture and storage and hydrogen production, as part of the energy transition."

### UK gas 'still important': Shell

In a statement about the sale, Shell said it reviewed its portfolio in 2021 and resolved to focus on areas where it had competitive advantages to build a streamlined portfolio with a strong integrated value chain. Its main interests are now in the central and northern North Sea. Last year the Pierce field started producing gas after a major upgrade, while the newly built Penguins floating production, storage and offloading vessel is now preparing for start-up. Production will extend beyond 2035. Given the importance of gas to the UK energy security, Shell has also taken investment decisions on the Jackdaw and Victory gas fields, to sustain domestic gas production.

### TotalEnergies sells West of Shetland...

French major TotalEnergies has signed an agreement to sell to the Prax Group its entire interest in West of Shetland assets: Laggan, Tormore, Glenlivet, Edradour and Glendronach fields, the onshore Shetland Gas Plant (below) and nearby exploration licences.

The transaction is subject to approval from the relevant authorities.

The assets produce about 7,500 boe/d net to TE, of which gas comprises 90%. The transaction involves the transfer of relevant employees from TotalEnergies to Prax in compliance with the applicable legislation.

"This transaction is in line with

TotalEnergies' strategy to continuously adapt its portfolio by divesting mature non-core assets," said the company. It is retaining its Elgin-Franklin, Culzean and Alwyn fields.

Last year Prax bought Hurricane Energy's 100% operated interest in the Lancaster offshore oil field in the West of Shetland basin

CEO Sanjeev Kumar Soosaipilla said: "With a strong track record of integrating acquisitions and managing assets in the oil and gas value chain, the Prax Group is a long-standing and trusted partner of TotalEnergies. The announcement of the signing of this agreement is the culmination of many months of solid co-operation between our respective companies."

### ...and buys Notts CCGT

TotalEnergies has agreed to buy a combined-cycle gas turbine power plant from EIG, an institutional investor, for £450mn. The West Burton B plant in Nottinghamshire has a total capacity of 1.3 GW. Commissioned in 2013, it is one of the UK's most advanced power plants. A 49-MW battery storage system was added in 2018.

TotalEnergies will supply the plant by leveraging its positions in natural gas production in the UK, where it operates 30% of the projects it is involved in.

TE's UK renewable portfolio stands at 1.1 GW of gross installed capacity and 4.5 GW under development and it assesses its need for gas-based power



generation capacity at 700 MW. It therefore plans to sell half.

The deal will also allow TotalEnergies to strengthen its trading capabilities in the country's electricity and gas markets, as well as its ability to provide increasingly affordable, available and sustainable energy to its 300,000 UK electricity and gas customer sites.

## Upstream

### Shell rig moves to Selene

Operator Shell's Valaris 123 drilling unit began operations on the Selene well in the southern North Sea in late July, according to licensee Deltic Energy. Drilling at the high-impact, infrastructure-led exploration project is expected to be completed in three months.

Shell's stake in Selene is among the package of assets being sold to Viaro (see p18).

Deltic estimates the Selene structure holds gross P50 prospective resources of 318bn ft<sup>3</sup> and estimates its portfolio of upstream assets is worth multiples of its market value. Deltic is fully carried for its 25% working interest in the Selene well up to a gross success case well cost of \$49mn. Dana is the third partner.

Deltic Energy has also accepted one of the two licences provisionally awarded by the North Sea Transition Authority in Tranche 3 of the UK's 33rd licensing round, it said July 8.

Blackadder, just to west of the West Sole field and south of Ravenspurn, has many analogous attributes to the Selene prospect, where the reworking of legacy datasets has unearthed a potential missed pay opportunity of material scale, Deltic said. It is also near pipelines that now have spare capacity.

### ...But Deltic quits Pensacola

Deltic Energy has withdrawn from the UK southern North Sea licence P2252 that contains the 326mn barrels Pensacola prospect, it said June 11 in a

London stock-exchange announcement (*OEUK Magazine #59, p22*).

It had failed to find a farm-in partner for the oil and gas field and cited the "deteriorating sentiment towards the oil and gas industry as a result of ongoing fiscal volatility and negative political rhetoric in the run-up to the July election."

Deltic said it had "rigorously examined a wide variety of funding solutions," which included strategic investors, debt providers and commodity trading houses before taking the decision.

It will now transfer its stake to its joint-venture partners Shell (operator, 65%) and Dutch explorer ONE-Dyas (5%), in line with their joint operating agreement.

It said it may still have to cover some of the appraisal well costs which were approved by the JV before Deltic issued the withdrawal notice.

### NEO slams on the brakes

Private-equity backed producer NEO will "materially slow down activities" in all its UK assets, including the Buchan licence which it co-owns with Jersey Oil & Gas, it said in a stock exchange statement September 2.

The decision followed the government's plan to consult on new environmental guidance for oil and gas firms, in light of the recent Supreme Court "Finch" ruling. The government aims to conclude its consultation by next spring.

JOG said this would "inevitably delay first oil timing in relation to the project, which was previously forecast to be late 2027. The joint venture will seek a licence extension.

CEO Andrew Benitz said that "Emissions arising from the combustion or use of [imported] hydrocarbons will result in the same emissions as comparable barrels regardless of where they are produced. Homegrown energy should always trump imports, creating domestic economic growth, jobs and valuable UK tax receipts."

### NSTA approves Belinda

The North Sea Transition Authority granted a Development and Production Consent for Serica Energy's Belinda field in the central North Sea, the regulator said. "The project will support the UK's energy production and make use of existing infrastructure to minimise emissions. It will also create jobs and provide investment in the supply chain," said its May 20 statement.

Belinda is in the Triton Area which consists of eight producing oil fields developed via common infrastructure some 190 km east of Aberdeen in water depths of 90 m. The fields producing oil and gas through the Triton Floating Production Storage & Offloading vessel are Evelyn, Bittern, Guillemot West and Guillemot Northwest, Gannet E, Clapham, Pict and Saxon.

Dana Petroleum and Waldorf Production are Serica's partners in the Triton cluster. Dana currently operates the Triton FPSO along with the Bittern, Guillemot West / North West, Clapham, Saxon, and Pict fields. Serica is operator of the Gannet E and Evelyn fields, with Dana as pipeline operator and Petrofac as well operator.

## Mergers & Acquisitions

### Proserv completes buyout

Aberdeen headquartered Proserv has completed a sponsor-backed management buyout and is introducing an employee ownership scheme, the global controls technology specialist said July 23. This marks "a significant milestone in the company's 60-year history," it added.

Led by CEO Davis Larssen and CFO Mark Fraser, the multi-million-pound deal is backed by GILL, a UK-based investment vehicle which has been involved in the company's financing for two years. During this period, Proserv has reported a 34% increase in annual turnover.

It said Proserv could now "accelerate its five-year growth trajectory and

# Member News in brief

extend its market presence in renewables while continuing to deliver exceptional value to its customers across its core business of oil and gas.”

## **THREE60 Energy buys Samphire Subsea**

THREE60 Energy has bought Samphire Subsea, it said June 26. The deal enhances its broad range of energy services, adding subsea engineering, operations and decommissioning experience.

This is the latest in its series of strategic acquisitions to broaden its industrial diversification and geographical growth.

Samphire was set up in 2012 by subsea industry experts to provide services for assets in mature basins. Since then, it has grown to the point where it can offer a fully integrated service to maximise the value and efficiency of operations and project delivery. In May, THREE60 won the Scottish Engineering Sustainable Development Award.

## **3t buys ALL STOP! to extend US energy safety training**

Industrial safety training company 3t has bought US company ALL STOP!, it said June 12. This strategic tie-up will combine ALL STOP!’s exceptional practical training with 3t’s market-leading learning technology.

Since starting up in 2018, ALL STOP! has grown fast and it is now an established multi-million-dollar revenue business. 3t issues 100,000-plus certificates annually for over 600 courses, such as survival centres and marine facilities, at 10 global training centres.

CEO Kevin Franklin said the two companies fitted together well, enabling them to deepen relations with existing clients and to attract new ones.

Nick Harrison,  
new Spirit energy CFO

## Corporate

### **Equinor appoints new UK upstream head**

Norwegian state-controlled producer Equinor has appointed Camilla Salthe as its senior vice president (SVP) for the UK upstream business. She takes up the post September 1, when the incumbent, Arne Gurtner, moves back to Norway as SVP for Technology, Digital & Innovation.

Ms Salthe joined Equinor in 2003 and has held various leadership positions within petroleum technology and business development. Most recently she was SVP for field life extensions. Wishing her the best in her new role, Mr Gurtner said it had been “an absolute privilege” to have had the opportunity to head up Equinor E&P International and work with its exceptionally talented staff.

### **Spirit appoints oil veteran as new CFO**

Centrica’s upstream subsidiary Spirit Energy has appointed Nick Harrison (*below*) as CFO, it said July 30. He has over 30 years’ experience of the energy sector, having previously held positions with Repsol Sinopec, Talisman Energy and Shell.

Spirit is moving towards a net zero future. Last year it landed a licence to repurpose its North and South Morecambe gas fields for storing CO<sub>2</sub> and Mr Harrison said that the company’s “clear strategy was a driver to attracting me to the company. The three strategic pillars covering its decommissioning work, safety and its contribution to the UK’s net zero targets through its



Morecambe Net Zero carbon store project, really illustrate Spirit Energy as a leader in its field.

Spirit Energy said Mr Harrison “brings excellent technical knowledge together with a first-class track record of leadership and will be an asset to our finance function.”

### **CONSUB subdivides into three**

Subsea engineering and project management consultancy CONSUB has created three distinct pillars to negotiate the energy transition, it said May 13. These are Oil & Gas; Decommissioning; and Renewables.

Headed by company founder Paul Melnikov, Oil & Gas supports CONSUB’s legacy of excellence providing engineering and project management services to UK and international deepwater development projects.

Business manager Jon Taylor will head Decommissioning which will handle ageing infrastructure, late-life management and ultimately asset removal.

CONSUB director Malcolm Blackmore will head Renewables with marine geoscientist Douglas Hall running it on a day-to-day basis. He is also CONSUB’s group survey manager.

Leveraging its extensive experience in subsea oil and gas engineering and construction, along with the formation of new strategic partnerships, CONSUB will play a growing role in the transition towards renewable energy sources, including offshore and onshore wind, floating solar and green hydrogen, it said.

### **THREE60 appoints EPCC projects director**

THREE60 Energy has appointed Richard Jack as projects director in its engineering, procurement, construction, and commissioning (EPCC) division at its Glasgow office in Govan. Mr Jack has over 30 years of energy industry experience since graduating as an engineer from the University of Strathclyde.

THREE60's EPCC division has also hired Dave Wallach as business services manager. Mr Wallach brings valuable expertise in project controls and systems having spent decades on global assignments with large multinational energy service organisations.

"I am delighted that we are able to attract such talented and experienced leaders to our organisation," said THREE60 EPCC CEO Alastair Smith in the company statement July 23.

## Verlume shortlisted three times

Subsea power storage and supplier Verlume is a triple finalist at the August 22 Scottish Green Energy Supply Chain Awards, it said September 12.

The awards shortlisting comes at a time of significant growth at pace for Verlume. CEO Richard Knox said: "It is fantastic to have been shortlisted in not one, but three categories at these prestigious awards."

Among other projects, Verlume is working with Mocean to develop a generator and subsea storage system that converts wave energy into electricity for use on oil rigs.

## Port of Aberdeen donates to charity

A team of Port of Aberdeen employees competed in the 24 Peaks Challenge and raised more than £26,000 for The Seafarers' Charity. They completed the run within a 48-hour window, covering 30 miles. Port of Aberdeen match-funded the team's fundraising efforts which led to the port winning the 'Top Fundraiser' prize.

CEO Bob Sanguinetti said he was "hugely delighted that we've been able to make a respectable contribution in support of such a wonderful charity – thanks to everyone who donated."

## Training

### Marine Technical Limits promotes VR training

Construction and engineering firm Marine Technical Limits (MTL) hosted students from Kemnay Academy for an immersive educational experience in

May. It also sponsored five state-of-the-art headsets for the students' studies, as part of a programme to enthuse and educate the next generation of workers in the energy industry.

Students had a rare opportunity to learn what technology can do for the energy industry. They engaged in hands-on activities that illustrated the innovative ways in which MTL uses tech to enhance its integrity and engineering work.

The pupils were working on an interdisciplinary project as part of the school's focus on project-based learning. They researched ways of transferring skills from games development into the world of work using virtual reality.

A teacher at the academy said companies such as MTL who were willing to work with schools to help bridge the gap between school and the world of work were invaluable in terms of students' practical and motivational development. "We are extremely grateful to Marine Technical Limits for their generosity and support," said Kemnay Academy's lead business and community support officer Chris Dunhill.

### OPITO expands heli-training

Global energy safety and skills organisation OPITO has granted greater flexibility for training centres to offer helicopter underwater escape training (HUET), it said July 2. They may now offer HUET as a standalone course, irrespective of offering full basic offshore safety induction and emergency training (BOSIET) on site.

This passes efficiencies to industry workers, enabling increased mobility and tailored training across different parts of the energy sector. OPITO says "workers increasingly need to be prepared for helicopter travel."

In a simulated environment, energy workers undertaking the HUET courses will demonstrate that they can use safety equipment and follow procedures in preparing for and during helicopter emergencies. Escaping from

a helicopter following ditching is a key part of this training.

HUET-only courses allow organisations and workers to choose the necessary level of training standard required, from oil and gas to renewables.

### Global Flow Measurement launches programme

The Global Flow Measurement Workshop (GFMW) has released the main plenary technical programme for the 2024 event in Aberdeen this October.

New for this year is an Early-Career Delegate Ticket, which GFMW hopes will "encourage a new cohort of professionals that brings new ideas and diverse thinking during this transition period in the industry."

Sessions across the three days will cover single phase, multiphase, carbon capture and storage, hydrogen, emissions and digital developments. There will also be two panel discussions.

GFMW Chair Colin Lightbody said the body was looking forward to bring industry and regulators together in panel discussions about the 'hot topics' of the day.

### Industry safety survey 'shows engaged sector'

Data science company Empirisys and member-led safety organisation Step Change in Safety (SCIS) published the findings from their Process Safety Workforce Survey April 18. More than 450 senior leaders from 73 companies responded to it, showing a high level of engagement. Average scores were also high, indicating a confident and reflective industry, Empirisys said.

In addition to developing and delivering the survey, Empirisys' team of data scientists and engineers will utilise machine learning, diagnostics and AI driven tools to analyse the information uncovered and provide actionable insights.

Empirisys CEO Gus Carroll said the company shared SCI's commitment to protecting and, wherever possible, enhancing the safety of the energy sector workforce. (OEUK Magazine #58, page 50.)

# Member News in brief

## Training firm 3t raises \$100mn for expansion

Specialist energy sector training company 3t has issued bonds on the Norwegian stock exchange that attracted \$100mn in financing for its planned strategic acquisitions, it said May 9.

3t said it would deliver further value for its global customer base, prospective customers, and investors.

"This financing will provide us with the necessary resources to pursue strategic opportunities we have on the horizon complementing our existing capabilities. These plans will accelerate our expansion into growing markets, ultimately fortifying our position as the industry frontrunner," it said.

## Contract awards

### Kent sees busy first-half order-book

Global engineering and consultancy services provider Kent has secured \$1.2bn in new contracts in the first half of 2024, it said July 2. This underscores the company's continuing strong market presence. In support of its growing operations and to better serve its clients, Kent has expanded its presence in all regions, opening new offices in key locations.

In the UAE, Kent has won front-end engineering design and project management consultancy contracts, as the country pursues its ambitious decarbonisation programme.

Its commissioning business has also seen projects starting across the Americas, Europe, and Asia and the Pacific region. "We are incredibly proud of the progress and growth we have achieved in the first half of 2024," said Kent. "Our focus remains on leveraging our expertise to support our clients' goals and contribute to global initiatives, such as decarbonisation and achieving net-zero."

### Penspen income up in H1

Engineering consultancy Penspen has won contracts totalling \$106mn in the

first half of 2024, I said July 30. This is up 30% on the same period last year.

The bulk of the value (\$80mn) came from the Middle East and Africa, where it won 19 contracts. In the UK and Europe it won 58 new contracts totalling \$12mn, including engineering design services for hydrogen infrastructure, gas network maintenance services, gas transmission pipeline integrity services, and fuel management and bulk storage modification engineering services.

It said the UK and Europe was focusing on strategic energy security work, including the repurposing of critical infrastructure for hydrogen and the development of distribution and transmission networks for future fuels... our engineering and project management service line work is now split almost evenly between energy transition and energy security scopes."

### Bilfinger lands Scottish contract

Industrial services provider Bilfinger has won a significant three-year contract exceeding £20mn with a life science client in Scotland, it said July 18. The contract, which has an option for extension, aims to improve plant and maintenance operations and efficiency. The client is already a long-standing customer.

Bilfinger and the unnamed client will provide a single integrated solution for maintenance and turnarounds, including mechanical, electrical, instrumentation, access, insulation and painting services on site at the facility.

Its standardised best practice approaches such as the Bilfinger Maintenance Solution (BMS) or Bilfinger Turnaround Solution (BTS) mean that the company can deliver sustained value through enhanced operational efficiency and plant reliability while reducing cost and downtime.

### Wood wins Rough hydrogen Feed contract

UK consulting and engineering firm Wood has won the front-end engineering design (Feed) contract to

redevelop Centrica Storage's Rough gas field for hydrogen storage, it said June 26.

The field has the potential to provide over half of the UK's hydrogen storage requirements and the work will provide 50 new jobs.

Wood will work on new pipelines, a new unmanned installation and onshore injection facilities at the Easington Gas Terminal as the first step in making the field hydrogen ready.

Wood said it was proud to be a part of this innovative redevelopment project, critical to both the UK's long-term energy security and its industrial decarbonisation commitments.

Centrica said the project would need also a regulatory support model that would underpin gas storage investment in the UK.

## Transition

### Bilfinger, Highview work on air power

Bilfinger is collaborating with UK Highview Power (HP) to build the UK's first commercial liquid air energy storage facility. HP's long duration energy storage business is aimed at converting surplus electricity into liquid air. As the air regasifies, it expands and generates electricity through a turbine. HP's facility will also provide critical grid stabilisation services.

Bilfinger provided consultancy services during the pre-construction phase and will carry out procurement and construction, including mechanical, electrical, instrumentation, insulation, painting and structural steel work. It will also manage all the aspects of the construction, including civil works and equipment installation.

Bilfinger said the project contributed to the nation's renewable energy goals and to grid stabilisation efforts.

### Astrimar, Supercritical work on R-methanol

Technology assurance company Astrimar has agreed to support Supercritical and HAMR Energy

on their project to cut renewable methanol costs by up to a fifth. The demonstration project will use ultra-high efficiency, high pressure green hydrogen.

The partnership aims to bring commercial, world scale systems to market by 2030 using game-changing innovation in electrolysis from the UK and a burgeoning market opportunity for renewable methanol in Australia.

The project will be funded by the Australia-UK Renewable Hydrogen Innovation Partnership.

Astrimar will support the project by facilitating the development of a certification and compliance road map for the containerised product concept for markets in the UK and Australia. Methanol is used in maritime shipping, among other uses.

## DNV approves Digitising Reality's drones

Norwegian certification agency DNV has certified Digitising Reality's offshore remote inspection drones, the technology company said July 31. The drones can survey structures close up, in accordance with Class Programme DNV-CP-0623.

"The energy sector is rapidly incorporating unmanned aerial vehicles for inspections, emissions monitoring, and maintenance due to their ability to enhance safety, efficiency, and cost-effectiveness," said Digitising Reality. "The approval marks the next step in the growth of Digitising Reality and demonstrates our commitment to leveraging cutting-edge technology."

## Members abroad

### Wood wins concept study for Timor's Sunrise

Engineering consultancy Wood will act as the lead specialist consultant for a study for the Sunrise Joint Venture's (SJV) Greater Sunrise Development, it said July 2.

Wood will deliver a comprehensive concept study for the Greater Sunrise Development, considering engineering,

technology, financing, commercial structures, fiscal, environmental, health & safety and socio-economic drivers including local content. The study, on target for completion by no later than Q4 2024, will support the SJV to advance the development to the next stage.

SJV comprises Timor Gap GAP (56.56%), Australian Woodside Energy (33.44% and operator) and Japanese LNG trader Osaka Gas (10.00%).

Development of the Greater Sunrise gas field, in waters between Timor L'Este and Australia, has been on and off the planners' schedule for many years partly owing to a disagreement over where the gas should be processed: offshore or – via a very long subsea pipeline – on Timor L'Este.

### Wood completes giant Saudi CCS Feed...

Wood has completed the front-end engineering and design (Feed) scope for a carbon capture and storage (CCS) project in Saudi Arabia, the UK firm said June 10.

The goal of the project is to transport 9mn tonnes/yr to an onshore storage site by 2027.

It is expected to be the world's largest such hub, serving not only emissions from the facilities owned by state-controlled oil giant Aramco but also from third parties. Aramco plans to store up to 14mn tonnes/yr by 2035, almost a third of its goal of 44mn tonnes/yr by 2035.

### ...and lands a contract for Shell's Prelude FLNG

Wood also secured a six-year contract for Shell offshore Australia, it said July 9. It will provide brownfield solutions for Shell's Prelude floating liquefied natural gas facility off Western Australia.

Wood CEO Ken Gilmartin said: "LNG is a key transition fuel as industry balances the need for global energy security with the importance of urgent reduction in carbon emissions. We are delighted to build on our 70-year

global relationship with Shell to deliver integrated brownfield engineering solutions for Prelude, the world's largest floating offshore gas facility.

"The contract will draw on our global LNG expertise and underlines our position as a market leader for brownfield engineering across Australia."

### CONSUB helps India to energy independence

Offshore engineering contractor CONSUB has done more than 90% of the work for the ONGC 98/2 project offshore India, it said July 3.

First gas was achieved in 2020 on an accelerated programme, which CONSUB helped to develop and support. First oil flowed at the beginning of 2024 and four oil wells are now producing, supporting the Indian economy at a time of high prices.

ONGC approached CONSUB in 2018, at which point it had no Indian business. But it did have relevant project management experience in the oil and gas industry.

The challenges of entering the Indian marketplace were many, including banking, taxation and GST (Indian VAT) not to mention Covid19 restrictions but despite those, the 98/2 project has been a great success story for India.

### Ponticelli lands Angolan EPC contract

Ponticelli Angola has won an engineering, procurement and construction (EPC) contract with Azule Energy, it said June 19. Ponticelli's UK-based consortium PBS will provide expert engineering and procurement services support on the significant three-year contract, with an option for an up to two-year extension.

Ponticelli has worked offshore with Azule before: owned by BP and Eni, it is one of Angola's largest producers.

Ponticelli said the combined strengths of Ponticelli Angola and PBS will ensure we continue to build on our long-standing history, provide additional efficiencies and support the continued development of both Greater Plutonio and PSVM fields.

## On the road with the *Economy & People* report

Across the country, the offshore energy sector is playing a crucial role in building the UK's energy future through investment and skills.



At the Lowestoft office of Orbis Energy: Graham Elgie, Kevin Keable, Irene Bruce and Paul Hubbard



In June OEUK took to the road to share the findings of its *Economy & People* report. The offshore oil, gas and renewable energy industries are represented across the UK.

One of OEUK's flagship annual reports, its publication was expanded for this year to provide an update of both the offshore sector's workforce profile and fresh data on the extent of the industry's contribution to the UK economy.

It highlights the ways in which the industry and its people are improving energy security, cutting emissions and helping drive economic growth.

The challenge will be to maintain this momentum while the higher tax burden makes the sector less attractive.

At venues in Aberdeen, London, Lowestoft and Hull, audiences heard about potential pathways to economic growth. The report says the offshore

industry could invest £450bn in UK energy by 2040, building on our industrial strengths. Much of the press coverage led with variations on how jobs in the offshore energy sector could rise 50% by 2030 with supportive policy.

With all four breakfast briefings sponsored by Deloitte, the journey began in Aberdeen, hosted by OEUK's CEO Dave Whitehouse and chaired by Katy Heidenreich OEUK' supply chain and people director.

Coinciding as it did with the UEFA European Football Championship, the Aberdeen event led Terry Allan, executive director, Global E&C, to comment: 'In the UK, oil and gas companies are at risk of 'being benched' in the most important match that we'll probably ever play, one where we're playing for the prosperity of our country and the health of our planet.'

At Deloitte's Academy Auditorium in London, OEUK's external relations director Jenny Stanning chaired a session with guest speakers from Deloitte, the consultancy Xodus, Italian Eni and training body OPITO. They said governments that implement policies at different speeds and with prolonged delays only added to the pressures on the UK supply chain, while OPITO CEO Stephen Marcos Jones reiterated the relevance of oil and gas skills, noting that more than 80% are transferable to the emerging low-carbon energies.

Moving on to the second week of roadshows, data from OEUK's report show that more than 30,000 people along the east coast work in the offshore energy industry. In this region alone, they are contributing almost £2.5bn a year to the UK economy.

In Lowestoft, OEUK partnered with the East of England Energy Group (EEEGR) to present a roadshow at the Orbis Energy venue overlooking the North Sea. OEUK's Graham Elgie and Irene Bruce co-hosted, with EEEGR CEO Kevin Keable in the chair. Paul Hubbard of Bilfinger joined the panel session to give the supply chain's point of view on the energy transition.

Later that week, OEUK co-hosted the Hull roadshow with Grimsby-based training organisation, Catch. Katy

Heidenreich and Laura Moyle from OEUK welcomed Hazel Paige from the midstream company PX Group, one of the founding members of Zero Carbon Humber. Panellists also included Ian Livingstone from Equinor, Arran Taylor from Deloitte and the CEO of Catch, David Talbot.

Topics under discussion included the challenge of raising awareness of career opportunities in the energy industry. Panellists shared insights about efforts to encourage greater engagement between

educators and industry to broaden understanding of how oil and gas skills can play a part in developing the cleaner energy of the future.

The Hull breakfast was followed by a visit to Centrica's vendor event, where Katy Heidenreich promoted the industry's Supply Chain Principles. At OEUK's 2024 Share Fair, Centrica was one of ten gold medal winners. It was recognised for its outstanding collaborative and positive business behaviours with their suppliers.

The roadshow tour round the UK closed with Katy Heidenreich visiting Catch's Grimsby facility where Mr Talbot outlined the range of industrial training courses available to young people in the region. In an area where the Humber Hydrogen Hub is being developed and new low carbon projects are under way, Catch delivers training in a purpose-built process plant that simulates real-life operations.

OEUK plans to host more roadshows around the UK to highlight key energy hubs and their contribution to the UK economy and to the transition to low-carbon energy. More details about the report, and the Supply Chain Principles, are available on OEUK's website.

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'Gulliver', once the UK's tallest wind turbine, at Lowestoft



# Reap what you sow: New Zealand and its E&P ban

John Carnegie, CEO of the Energy Resources Aotearoa, describes the counter-productive effects that follow when governments push ahead with unrealistic energy plans

**A**mong the UK Labour Party's election promises was 'stopping the chaos' and 'turning the page' to deliver clean power by 2030.

It would not "issue new licences to explore new fields because they will not take a penny off bills, cannot make us energy-secure and will only accelerate the worsening climate crisis."

While not directly comparable, New Zealand's experience suggests that this will not end well for the UK.

## What did the UK get right?

This might be surprising, but from a New Zealand perspective there are at least two positive aspects to the UK government's priorities. First, it was transparent about its plans and did not spring them on the sector. The most egregious part of what the New Zealand Labour party did was the 'gotcha' shock of its 2018 announcement to ban new oil and gas exploration permits with immediate effect. The policy came out of the blue with no reference to it in its manifesto. Industry was only told on the morning of the announcement because news of it had leaked.

UK voters heard the pros and cons, the arguments from unions and employers and the voice of the sector from OEUK. This sounds like a real contest of ideas and voters will eventually determine if they were sold a lemon and hold the government to account accordingly.

The second positive for the UK is its commitment to "partner with business and workers to manage existing fields for the entirety of their lifespan." No such commitment was made in New Zealand. Quite the reverse.

Officials were directed not to engage with the upstream industry body that I lead, Energy Resources

Aotearoa, formerly the Petroleum Exploration and Production Association of New Zealand. It represents the whole range of companies active in the energy system, providing a strategic system perspective on energy issues ([www.energyresources.org.nz](http://www.energyresources.org.nz)).

While perhaps a response to the sector's combative and sometimes admittedly aggressive response as it reeled in shock from the announcement, all advice from the industry was treated as self interest at best, and outright dissent at worst.

Natural gas was to be phased out of New Zealand's economy, with no long-term role to play in the energy system. Partners do not always agree, but the UK government's commitment to partnership implies working together from a position of respect and common understanding. This sounds like a base on which to build and the government should be held to it.

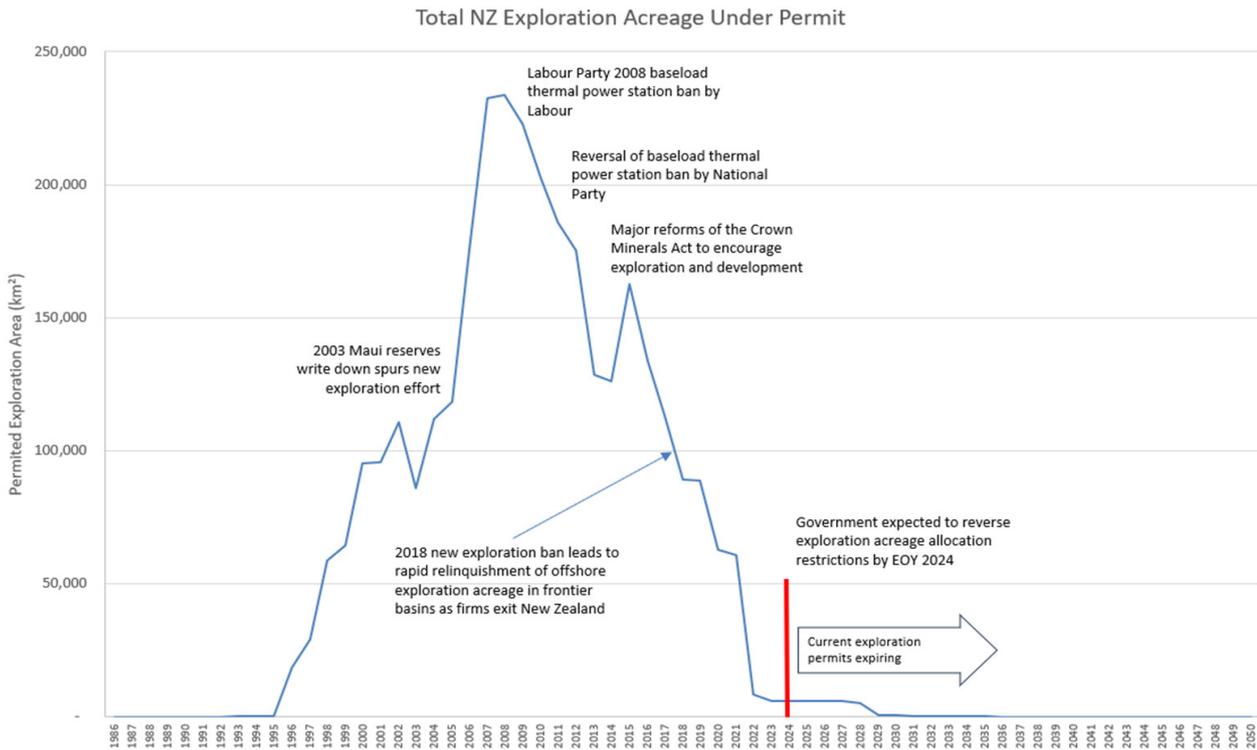
So what happened in New Zealand between 2018 and today that the UK could learn from?

This is not only of interest to the UK but remains relevant to our own Labour Party, now in opposition, which maintains that the consequences we now see in both the gas and electricity markets were not caused by the ban.

## But first, back to the start

On April 12 2018, the energy sector was blindsided by the announcement to ban new permits by the then prime minister, the Rt Hon. Jacinda Ardern. The intent was to hasten the electricity sector's progress toward a 100% renewable electricity system by 2030 and electrify our major industrial processes.

The economic implications were unfortunately foreseen. The ban coincided with major gas fields reaching near end-of-life status and the government was warned repeatedly that a ban would strangle gas supply. By failing to meet its need for ongoing



Source: Energy Resources Aotearoa, data supplied by the Ministry of Business, Innovation and Employment

investment in new opportunities, gas imports were likely. Experts reiterated the likely lasting implications for electricity prices.

These predictions were dismissed as ‘self-serving’ warnings from a ‘legacy’ industry. New exploration activity was to be confined to existing permit areas. Sound familiar?

The ban affected only the production of oil and gas that had not been discovered. In fact, the claim was that existing property rights had in fact “been protected.” The political ‘spin’ was that the change was free of both costs and risks.

Indeed, the public was misleadingly told that the 100,000 km² of licensed acreage in 2018 was plenty to see out the useful life of the sector and ensure we had sufficient natural gas as it was phased out.

Production levels were falling in any case, so it was only reasonable to look for its replacement. The decision put all our eggs into one risk basket – leaving New Zealand reliant on its existing mature fields.

### Tomorrow affects today

The sector was left to squeeze mature fields harder and harder just to keep the gas flowing. Unfortunately, despite investments exceeding NZ\$1bn (£500mn), this met with limited success.

The hope of a fully renewable electricity system has also proved to be a chimera. Shifting up from over 85% renewable supply is difficult and expensive despite massive subsidies. Policies aimed at advancing the renewable cause, like the ill-fated Lake Onslow pumped hydro project harmed long-term renewables and fossil fuel investments alike. This dampened investor confidence in building other renewable power projects.

The policy promise under which all businesses invest – that today’s investment will be kept whole tomorrow – was broken. A change in government policy tomorrow can now easily bring changes that would frustrate any investments made today.

This massive sovereign risk fundamentally changed today’s operating and economic context, making all future fossil fuel-related investments in New Zealand much harder to justify.

The damage was not just limited to the oil and gas producers but also potential investors in new gas-fired power stations and import facilities. Fearing the worst, investors fled.

At the time of the ban, there were 20 international and five local companies engaged in exploration and production in New Zealand and about 82,000 km² of frontier exploration acreage under permit.

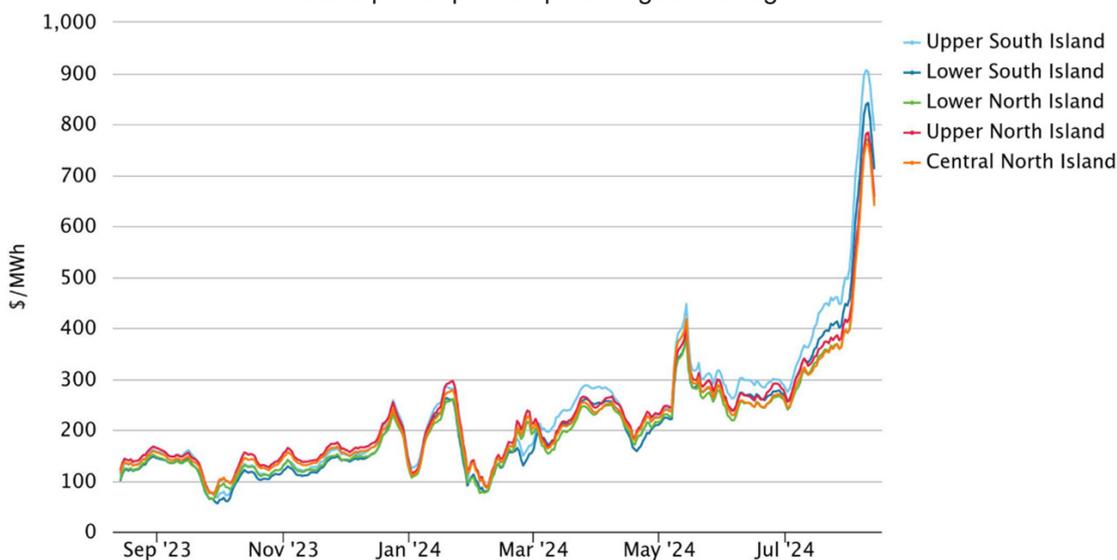
Today, there are only nine investors active in the sector — seven international and two local. All New Zealand frontier exploration acreage permits have been handed back. There is currently 0 km² in frontier acreage under permit.

Total exploration permits acreage trend, notable milestones and future relinquishment dates are shown above. Previous government initiatives to boost attractiveness and the elevated interest in the run up to the 2018 block offer were snuffed out by the ban.

### Could this be your future?

The effect of the ban has been catastrophic for our economy, environment, and people. Six years of greenfield exploration have now been lost and New Zealand now faces natural gas shortages and an energy system crisis.

### Wholesale power prices spike on gas shortages



Source: Electricity Authority, <https://www.emi.ea.govt.nz/market-statistics-and-tools>

Reduced gas production has come at a significant economic cost, especially to major export industries. See below for some recent media headlines.

Our energy system is in distress. Gas shortages, high prices and growing insecurity of electricity supply have seen electricity prices rapidly elevating.

The graph below shows the those buying electricity at reference points on the wholesale electricity market facing some of the highest prices in the developed world.

In turn, increased energy hardship has resulted for ordinary New Zealanders while strangling the international competitiveness of our gas-reliant heavy industry.

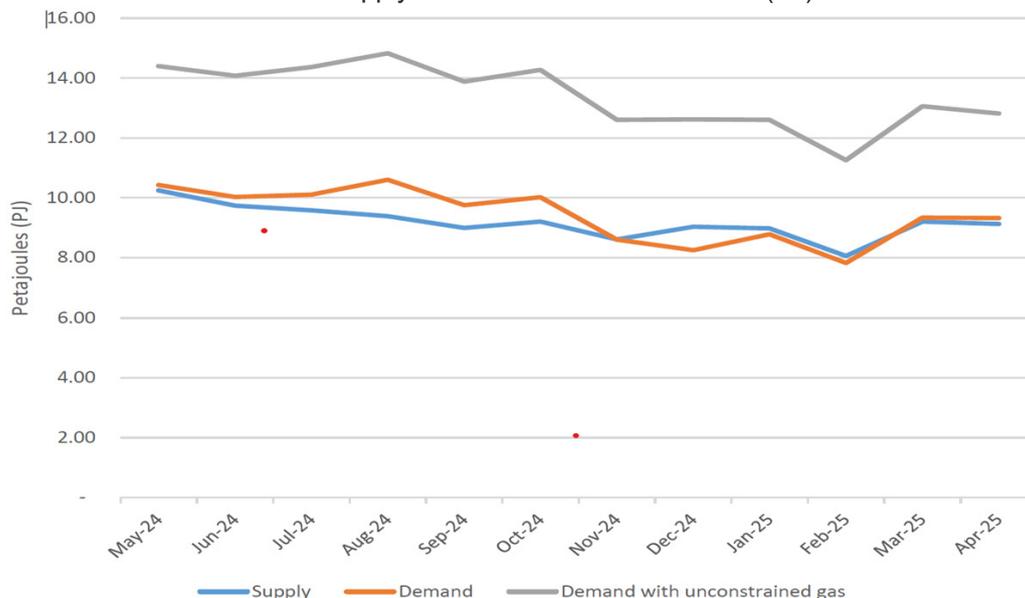
Factories are shuttering, jobs lost and provincial communities devastated as their primary places of

employment shut. Major gas and electricity users are having to reduce production so that the gas and electricity markets can work. New Zealand’s largest gas user Methanex has just announced that it is temporarily shuttering its plant to sell its gas into the electricity market.<sup>1</sup>

While New Zealand’s renewable electricity generation is expected to grow to over 90%, no one reasonably expects us to move beyond 95% in a cost-effective way. The intermittency and variability of our weather-based system needs to be backed by fossil fuels. Coal imports have filled the gap left by the reduced gas supply, scoring an environmental own-goal.

All of our gas production is used domestically. Reduced gas production means that we now have significant levels of unmet demand, and deliverability is

### Estimated supply and demand next 12 months (PJ)



Source: Ministry of Business, Innovation and Employment, Gas Security Response Group: Report back to Cabinet, published 17 July, 2024

<sup>1</sup>[www.methanex.com/news/release/methanex-corporation-to-temporarily-idle-new-zealand-operations-to-assist-in-improving-energy-balances/](https://www.methanex.com/news/release/methanex-corporation-to-temporarily-idle-new-zealand-operations-to-assist-in-improving-energy-balances/)



John Carnegie, CEO Energy Resources Aotearoa

expected to continue to lag behind.

Compounding this problem is our lack of LNG import infrastructure. Investigations into LNG imports are now moving at pace, though importing LNG has several pitfalls especially when we remain relatively under-explored.

### **Is there a way back?**

The New Zealand Labour government's strategy was a high-cost, low-certainty way of giving it a renewable future. It has instead proved a failed experiment.

Once the sovereign risk genie is out of the bottle it is incredibly hard to put it back, and once basic property rights have become unstable, political commitments can never be enduring.

Investors who were badly spooked by the 2018 announcement – and a range of subsequent announcements aimed at suppressing the role of natural gas in the economy – are wary of returning to New Zealand.

This is openly acknowledged. The government and industry, including its peak body Energy Resources Aotearoa, are now actively collaborating to find a pathway for capital to return. Changes are being explored to protect against capricious policy changes that could harm long-term investment decisions.

Recent reports that the UK could approve 13 new oil and gas projects despite the North Sea pledge is a hopeful sign that, with the Treasury benches, comes added responsibility to be fiscally prudent and carefully steward the resource endowment bestowed upon it.

Perhaps a lesson can be learnt from the New Zealand example after all.

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### **Sample of NZ headlines:**

**Sawmill shutdown due to high energy costs latest harbinger of manufacturing slowdown**

**Skyrocketing energy costs see businesses struggle to keep the lights on**

**Manufacturers call for 'urgent' Govt help with 'energy crisis'**

**New Zealand's sovereign risk gas bill comes due**

**Energy crisis: Simeon Brown says power shortage the problem despite gouging claim**

# Bringing method to bear on backlogs

SRCN Solutions' director Colin Wilson discusses the maintenance backlog problem and how his company is supporting operators and industry to reduce it.

**H**elped by some urging from the Health & Safety Executive, the highly responsible matter of maintaining oil and gas assets in a safe condition has reached the top of the list of priorities for many operators on the UK continental shelf. This is despite the convenience and cost savings gained from deferring planned maintenance. But the backlog has built up over some decades.

The steadily mounting list of jobs to be done offshore turned into a flood during the Covid-19 pandemic. As medical advisors recommended strict rules on workforce conditions, many routine tasks were stopped in their tracks. Understandably, the HSE has been calling for operators to catch up as a matter of urgency. While restrictions on travel and personal proximity during the pandemic inevitably slowed down the rate of catch-up offshore, it said that this was not the root cause of the backlog growing; it merely made the decades-old problem worse.

The backlog has become so large, collectively across the UKCS, that the regulatory agency doubts if the risks are any longer manageable, says Colin Wilson. SRCN Solutions was involved with writing the 2022 OEUK guideline on maintenance backlogs, even agreeing a definition that the industry can use: a deviation from the original plan, leading to delays. "Hope is not a strategy," he says.

## **Different causes, different effects**

Maintenance work comes with different degrees of urgency. There is safety-critical maintenance work on items such as gas detectors, to verify they work on demand, first time and meet all the requirements; the execution processes are right and personnel understand it all. Then there is business-critical maintenance work to check equipment does what it is needed to, first time.

Backlogs accumulate for a number of reasons, chiefly because there is too much work for the resources to execute, or the team's efficiency is low.

This leads to inefficiencies as there are either too many jobs for the staff engaged to complete; or because there is not enough equipment for the staff to use in the limited time available. Only a portion of the money spent paying a technician actually goes into the actual maintenance work. And time spent on preventative maintenance, but not the backlog itself, means "the best people are sometimes doing the wrong work," he says.

SRCN's methodical but agnostic problem-solving approach may be applied to other industries too, and this aspect of its DNA means that it can expand in terms of sectors it works in: it could be hydrocarbons, water, or car manufacturing, says Colin

Its fixed-cost, fixed-duration assessments carried out for clients generally result in recommendations for the operator to carry out. "We have found that it works best if we provide the clients with these commitments on cost and time in advance, conditional on the operator also providing us with commitments, such as access to plant on the dates we need," says Colin. "We never upsell, but we are often engaged to carry these tasks out as well, as the operator tends to be short of time. While we give them what they need to do to meet compliance, it is not a condition of contract that they then ask us to do the work we have recommended. We have always done what we said we would and in the time and for the price we said we would charge," he says.

## **Artificial Intelligence**

Maintenance work itself is reliant ultimately on human resources, both physical and intellectual. Perhaps for this reason, Mr Wilson is agnostic on the question of artificial intelligence (AI) as a diagnostics tool. He is not sufficiently convinced that the quality of the data that AI is fed is of a sufficiently high quality to produce diagnoses that you could trust other people's lives with. It cannot tell you what information was put in that produced the diagnosis. And with inadequate data,



Colin Wilson

any analysis of it will be unreliable. "I have not yet seen the back end of a review by AI, but I have never had a satisfactory answer to the question, 'Would it work as robustly as we do?' It all sounds very seductive but thus far we still need the people in the room."

Assembling a roomful of engineers who have all had experience of a particular pump, by contrast, will lead to the right questions being asked about the performance of an item of equipment and a discussion about any peculiarities of its functioning.

It may take a lot more time to interpret than electronic data but the answers will be reliable. He uses the phrase "water-melon" alerts to refer to seemingly 'green' lights turning red if you probe more deeply. This shows teamwork and corporate memory at this moment in time is beyond the scope of AI, useful though it is in more general or less critical applications.

Operators do have a wide range of problems to tackle, for which again practical knowledge is often more valuable than a masters in business administration. One of them is dealing with redundancy: assets may be designed for a high daily volume of throughput which falls as reservoirs drain, but the operator still has to maintain the whole unit over its lifetime. A lot of the challenge is keeping operating expenses proportional to the throughput. And older assets, are also more of a burden as there is more to go wrong, he says.

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**"We have always done what we said we would and in the time and for the price we said we would charge."**

*Established in 2017, SRCN Solutions has a strong track record having worked with a wide range of operators including Shell, BP, CNOOC, TotalEnergies, Dana Petroleum, PX Group, Ithaca Energy, Centrica Energy and Spirit Energy. The company removes obstacles holding such companies back: backlogs, excessive costs, budget constraints and inefficient, unreliable operations. SRCN works independently within organisations and advises them how to resolve their issues and change for the better. SRCN also wrote OEUK's Guideline on Maintenance Backlogs.*

# Scottish Enterprise

Jamie Sansom, Strategic Lead for offshore wind, sets out the agency's ambitions for renewable energy and its rationale for financing projects.

It's difficult to underestimate the growing global demand for offshore wind – or its potential to transform the Scottish economy.

For my team of industry experts at Scottish Enterprise, the key to success is understanding and anticipating what the market will look like in the future, but also ensuring that businesses across Scotland take full advantage of the opportunities that already exist in this vibrant energy transition sector.

The next five to ten years will be a defining time for the Scottish economy, and here at Scottish Enterprise we remain focused on working with businesses and partners across the country to help deliver economic transformation. In the face of global economic challenges and constrained public finances, it's more important than ever that we remain laser-focused on those high-growth markets where we can make the biggest impact – where companies in Scotland are best placed to compete internationally and achieve their growth ambitions.

The transition from fossil fuels to more sustainable and environmentally friendly solutions has seen the emergence of new and exciting sectors and market opportunities. This makes for a once-in-a-generation opportunity for entrepreneurs and innovators to seize the moment and transform the Scottish economy.

## Offshore wind and net-zero

Offshore wind is one of the energy transition markets that will play a critical part in the global race to net zero emissions. The UK remains a world leader in offshore wind, accounting for about a fifth of global offshore wind capacity, with 11.3 GW of plant operational. In Scotland, developers have outlined ambitious plans to invest £29bn in the ScotWind offshore wind projects and the Scottish government has announced £500m to fund offshore wind development and to ensure delivery against their deployment target of 11 GW by 2030. Globally, expenditure in the sector is expected to reach £210bn in the next decade.

These numbers leave little doubt that the sector will continue to grow exponentially as demand for low carbon technology continues to increase both domestically and internationally. Let's be honest

though, global gigawatt numbers and phrases like 'seizing the opportunity' are a bit nebulous when it comes to informing business decisions. Businesses tell us they find it more helpful if they have a defined problem to solve, and a tangible project or opportunity to get involved in.

That's where our offshore wind team comes in. Our mission is to ensure that all Scottish businesses can benefit from the energy transition opportunities that exist now, as well as those coming, to enable Scottish firms to grow their market share and open up new lines of business.

## Supply chain: routes to market

The key to our success is making sure we have an in-depth knowledge and understanding of both the needs of the industry developers, and the capabilities and specialisms across the supply chain in Scotland.

To give an example, we know that developers are looking to build wind farms in Scottish waters. As part of the ScotWind bidding process, these developers have indicated how much money will be spent in Scotland, in the UK, in Europe, and in the rest of the world. The spend is apportioned across development, manufacturing and fabrication, installation, and operation.

The largest portion of the planned spend in Scotland is in manufacturing and fabrication, and so the role of our team is to get a strong sense of the specific needs of the developer – and to share that information with companies across the supply chain to find viable solutions here in Scotland.

Scotland has work to do to establish supply chains capable of producing top-tier components such as blades, cables, floating foundations, and the necessary port infrastructure.

That said, we know that businesses operating in Scotland have tremendous heritage and strength in manufacturing and fabrication and in port operations. So, our immediate priority is to do all we can to help companies that want to become part of truly successful and globally recognised supply chains here in Scotland.

Supply chain businesses in Scotland are telling us they need more information about the lower-level



Jamie Sansom

components and materials that make up the major components. They want to know who buys from whom within the tiered supply chain structure. They want to know volumes and routes to market. They want to know where to seek wider advice and financial support to ready their business to meet the demands of offshore wind. To that end, my team has just launched a series of manufacturing factsheets which provide background information for companies wishing to enter the offshore wind supply chain.

Our team of specialists is building a detailed picture of the bills of materials needed to make major components right through the tiered supply chain. Working with the offshore wind clusters and bodies like Scottish Engineering and the Energy Transition Zone, we are populating that picture with companies operating in Scotland which have the capability to make a component or supply a raw material.

The team share knowledge about companies in Scotland that have ambitions to, or can already provide, raw materials and subcomponents into those supply chains. They are making introductions where they can and creating a network of buyer/supplier relationships to help with route to market. There will undoubtedly be gaps in that supply chain picture, and our first strand of supply chain development is to fill those gaps with inward investors, ambitious indigenous companies, or companies with innovations.

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**"Our immediate priority is to do all we can to help companies that want to become part of truly successful and globally recognised supply chains here in Scotland."**



Photo: istockphoto.com/ MR1805

This is where the team brings in the wider expertise of Scottish Enterprise, Scottish Development International, Skills Development Scotland, and other organisations such as Offshore Renewable Energy Catapult and the Offshore Wind Growth Partnership. These organisations help to strengthen the performance of companies already supplying the sector and to fill gaps in the supply chain.

This approach has been welcomed by developers and tier 1's because it aligns well with the work of their procurement package managers. It's also been embraced by suppliers across the supply chain as an effective way of promoting their capabilities, and by companies looking for opportunities to diversify into the offshore wind market.

### **Building supply-chain relationships**

Through our combination of Business Support services and advice, our access to funding and investment and our industry networks at home and overseas, we can help your business take advantage of the enormous economic opportunities within offshore wind and across all of the energy transition markets.

The more information we have on the supply chain, the easier it becomes for our team of experts to match your business with relevant buyers or identify new opportunities – not only in the offshore wind sector, but in other energy transition markets, such as hydrogen or clean heat.

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**"This approach has been welcomed by developers and tier 1's because it aligns well with their procurement work."**

If you're a supply chain company, we would encourage you to get in touch with Scottish Enterprise so that we can get a better understanding of your business' capabilities and expertise.

If you're a developer, get in touch with Scottish Enterprise so that we can provide an overview of the strengths and capabilities across the supply chain that may appeal to you.

Building these relationships will allow us to make connections, share information, and solve problems together.

## Green Volt secures planning consent

The owners of the Green Volt floating offshore wind have permission to go ahead, building up to 35 floating wind turbines that will provide up to 560 MW of renewable energy capacity.

As part of Crown Estate Scotland's Innovation and Targeted Oil & Gas (INTOG) leasing round, Green Volt will reduce carbon emissions by 1mn tonnes/year, the project owners announced in April.

Scottish Enterprise declined to comment on its role it played in this, citing commercial confidentiality.

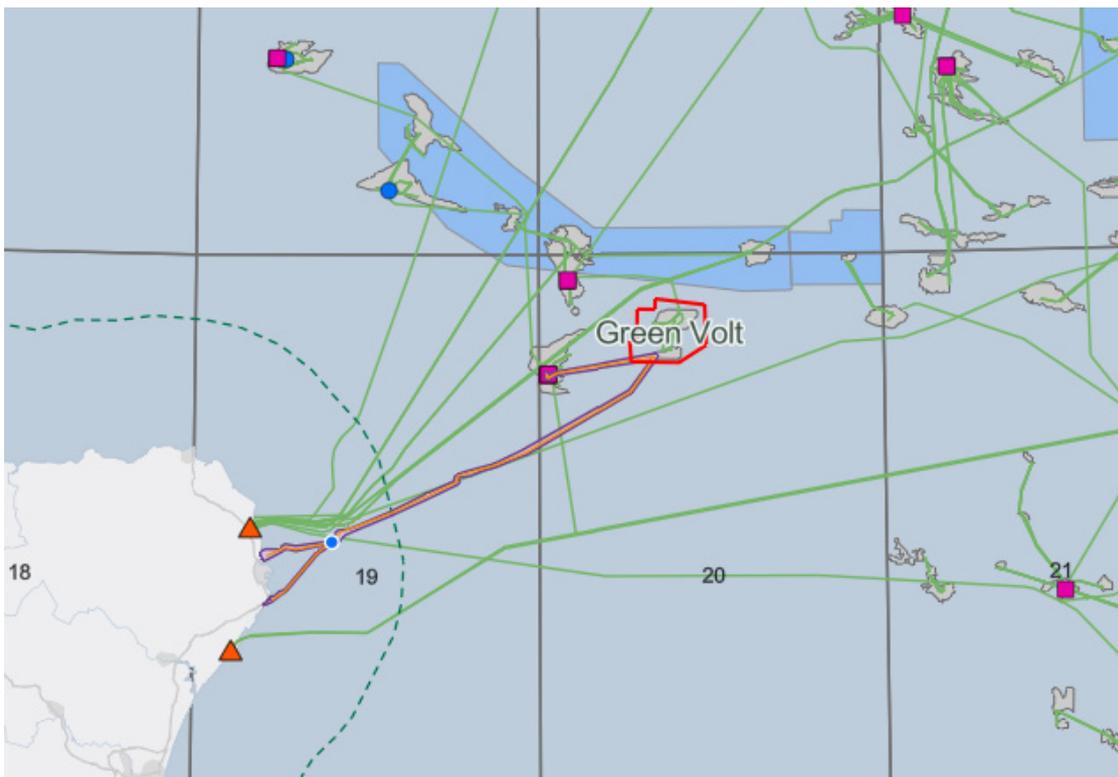
The project's developers Flotation Energy and Vårgrønn will not only decarbonise oil and gas platforms but also deliver green power to the UK grid.

It will allow the full retirement of existing offshore power generators. Participating offshore oil and gas platforms will see their carbon emissions from electricity use cut by more than 80%.

Vårgrønn is a joint venture owned by Italian energy major Eni and Norwegian venture capital-backed HiTech Vision.

**"Gaining consent just over a year after our seabed exclusivity was awarded is a testament to the commitment, speed and determination of our Green Volt team, the Scottish government and its key agencies."**

**"The location of the project in the vicinity of oil and gas fields and associated infrastructure presents a unique opportunity." – Green Volt**



# Juran Benchmarking

Managing Director Ian Fairbairn explains the role and importance of independent benchmarking for oil and gas upstream companies in an ever more environment and cost-conscious world.

**W**hat you cannot measure, you cannot manage and therefore systematically improve. Every enterprise in a highly competitive industry with a lot of moving and sometimes hazardous parts needs to keep track of its own metrics, to manage each of them more effectively, keep on top of safety and still remain competitive.

The oil and gas sector is one such industry: the number and types of variables on any given asset – its age, plant capacity, workforce numbers, production profile, the chemistry of the hydrocarbons, the contracts governing any third-party infrastructure and so on – are often unique to that asset. And given the takeovers and mergers over the past decades, there is not always a reliable corporate memory. All of this makes it important to have rock-solid and independently sourced and contextualised data.

Benchmarking has a long tradition of finding proxies to substitute for direct comparisons. This is where Juran Benchmarking comes in, applying its proprietary methodology for normalising each of the assets that a company operates. Its Juran Complexity Factor® (JCF) weighs up the effort it takes and the cost of maintaining each of the components in these assets, from valves to compressors, to determine the JCF. That is then used to normalise and compare them with their peers.

While the \$/barrel production cost provides an important commercial snapshot of the asset's competitiveness, the JCF instead provides a measure of true efficiency with its unique method of normalisation. It digs deeper into the asset's efficiency and effectiveness. It looks at, for example, the control room costs, how much is spent in the field and on supervision as well as the health and safety, emissions, reliability and other elements. These are then all normalised with reference to the JCF.

## The benefits

Juran Benchmarking's clients – from operational level, through board level to shareholders – have contracted its service because they need to know not just how competitive every one of its assets is, but what is under-performing and where the gaps are.



Ian Fairbairn

Companies who have reason to expect their assets to perform strongly might also have taken on Juran Benchmarking to endorse their corporate valuation or to demonstrate their success in optimising costs or minimising emissions, for example.

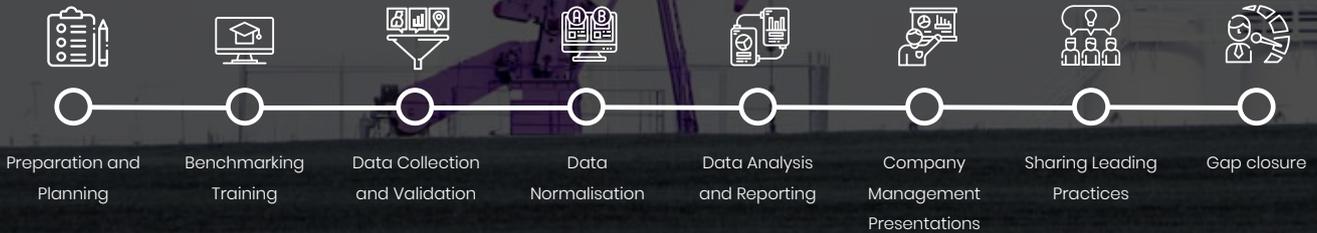
The information may also be useful in merger discussions where the target feels it is undervalued. Conversely, with the takeover company's approval, the bidder may commission Juran Benchmarking to do the due diligence work, based on data that the target supplies. Apart from limited cases of that nature, confidentiality is a key part of the process. For presentation purposes all the data – except the client's – is anonymised.

The benchmarking process comes up with over 100 data points and shows whether the operating expenses are optimal, given the asset's performance; and if not, how much was wasted and where. On the other hand, the company might be underspending, resulting in increased malfunctions or lower production rates, for example. To the impartial eye of the JCF, under- and over- spending are both red flags.

From the energy transition point of view, Juran Benchmarking assesses both scope 1 and 2 emissions. More and more this is becoming legally binding on producers, who are coming under greater pressure

## Our Approach

The Juran Benchmarking Cycle® provides a well-established systematic approach to the benchmarking



from regulators within the European Union to submit accurate data for fugitive and point source emissions. Juran Benchmarking will provide a comparative assessment of these emissions. This is a key step towards identifying opportunities suitable for cost justifiable reductions where gaps in performance have been identified.

And while the UK continental shelf as a mature province is shifting more of its energy into decommissioning, Juran Benchmarking is already developing a business model for benchmarking carbon capture and storage and hydrogen production.

Opex and workforce productivity forecasting is also on the menu: knowing the design of a new facility and using the JCF it is possible to determine expected operations costs and workforce requirements to support the calculation of likely operating margins.

### The process

The benchmarking assessment period is typically 12 months, this being long enough to cover performance during downtime, peak production and everything in between.

The benchmarking data that is used only comes from the company – there are no public sources included. All data is fully validated by Juran Benchmarking to ensure that only good quality data is included in the analysis. An important benefit of Juran Benchmarking's approach is that the asset's data comes back to the client contextualised with respect to spare capacity, downtime, its age and so on: there is such a large amount of relevant data in the JCF that any asset, based on the sum of its values, can be placed precisely and measured against its peers.

At the start of the process Juran Benchmarking holds a kick-off meeting with key company personnel to outline and explain the process and agree key milestones. Its team of experienced consultants and analysts work with the client over a period typically around three to five months to validate, normalise and analyse the data before presenting the results

## "Juran Benchmarking is already developing a business model for CCS and hydrogen production."

to the client's management team. At the end of the benchmarking assessment there is the option of a two-day Gap to Potential workshop which is aimed at developing an action plan to close the gaps identified by the benchmarking. This action plan would be discussed and agreed with the client's management team.

### Corporate history

Set up by Dr Joseph Juran, the internationally recognised guru of Quality, the original company Juran Institute had its roots in Quality Management. Established in 1979 as a training, research and consulting organisation, it began providing benchmarking services for the majors operating in the North Sea in 1995. Since then, it has amassed decades worth of data and experience. In 2017 it was bought out by Phillip Townsend Associates, a Houston-based company that benchmarks the petrochemicals and liquefied natural gas industries and with which it shares many common factors. With operations globally, its UK North Sea business is managed from its office in Scotland.

# ASCO backs new energies while supporting oil and gas

After last year's change of ownership and management, the British logistics firm is moving in greener directions at home – and keeping a beady eye on its core market.

**B**usiness has boomed for logistics firm ASCO since it was bought by the British private equity company Endless a year ago. ASCO said at the time that the acquisition would reinforce its position in renewable energy.

Growth in general though is ASCO's watchword and it has already seen significant increases in profitability since the acquisition. ASCO aims to boost profitability worldwide by a further 40% over the next five years, primarily through new energies and territorial expansion. Meanwhile it has halved its greenhouse gas emissions since 2019. ASCO's goal is to develop initiatives to enable the company to meet net zero greenhouse gas emissions worldwide by 2040.

Since the acquisition it has had a new CEO, Mike Pettigrew, who took up the reins in October. Eight months later, he created a new role for head of new energy and net zero, and appointed ThuyTien Le Guen Dang to the position.

Previously she had been the group's sustainability and marketing manager. Her new role is to direct the company's positioning for global growth in new energy: wind power, clean fuels and carbon capture and storage.

"The two aspects of my role are inter-related. The energy transition is all about getting a low carbon energy system. There are huge opportunities for ASCO in the new energy markets as a key enabler with proven expertise in the delivery of projects from logistics consultancy through to operational delivery and co-ordination," Thuy-Tien said in a June press release.

"ThuyTien has already demonstrated her passion for our net zero aspirations and the direction of our business growth. We can think of no one better to take a leading role in supporting ASCO as it looks forward to transformational times ahead," said Mr Pettigrew.

Excluding its fuels trading division, half of ASCO's revenues come from outside the UK. Its good relationships abroad with producers have helped it to win contracts at home in the UK. ASCO landed a contract extension with the UK major BP for its UK assets earlier

this year, following a five-year contract that started in late 2023 in Trinidad & Tobago, where it is the biggest gas producer. There, ASCO will provide a supply base and pipeyard management services for all 16 of BP's offshore locations. "We can provide support in the form of end to end logistics during all phases of BP's projects," said Tony Wright, who has been group CFO since July 2023.

He returned to the UK to take up the job after a spell abroad and says the time has flown by since then. He described the job as a "fantastic opportunity" and part of the appeal was the company's "safety, service and sustainability" motto.

For BP's and TotalEnergies' UK businesses, ASCO will support each operator in northeast Scotland. ASCO will leverage its service lines from quayside operations, materials management, ship agency, road transport, aviation and environmental services.

## Teesworks supports transition

Also In June, ASCO landed a logistics contract with Teesworks, the largest of the UK freerports. It will play a significant part in the energy transition.

Teesworks is being developed as an integrated energy hub and will support new energies such as hydrogen, CCUS and offshore wind projects, including monopile manufacturing by SeAH Wind. "We definitely want a position in this region. A lot of projects are moving towards completion and awaiting final investment decisions," said Mr Wright.

Mr Pettigrew said: "The South Bank Quay is a flagship project for ASCO, propelling us along the right track right at the start of 2024, *en route* to achieving our future goals. It confirms and reinforces our intention to make significant investment into increasing our footprint in the new energies sector over the coming years."

The work, which will include quayside planning and scheduling, operations co-ordination, vessel scheduling, stevedoring and internal distribution



Tony Wright

services, will focus on Teesworks' South Bank Heavy Lift Quay, which incorporates a new 450-metre quay to service the offshore energy sector.

"Teesworks is an incredibly visionary part of the growth plan. Billions have been invested and the customs-free zone covers 4,500 acres. It has already drawn in a vast amount of yellow goods," says Mr Wright. The planning and construction of such an operation is repeatable: what he calls 'a shorebase in a box': an end-to-end logistics system that can be repeated elsewhere. SeAH will assemble the monopiles – the pillars of a wind turbine generator – there.

Teesworks' contract with ASCO means that they will be employing 65 people at Teesworks in total, but Mr Wright says that each job will have the potential to create hundreds of indirect jobs.

And earlier this year, ASCO won a contract with Centrica Energy Storage (CESL) to manage its warehousing, waste management and logistics services. There could be a lot more to come as CESL plans to invest up to £2bn over the coming decade to redevelop the Rough field offshore East Yorkshire and make it hydrogen ready. The former gas field was converted into the UK's biggest gas storage facility offering seasonal security and it is now seeing further upgrades to improve market stability.

### **A foot in both camps**

Thuy-Tien Le Guen Dang says the company is diversifying – while keeping a strong position in the oil and gas market.

ASCO is taking a leadership position in realising the energy transition. This is not without cost but supportive clients have helped. Switching from diesel to hydrotreated vegetable oil for its fleet of vehicles

has pushed up operating expenses – it costs £500k/year extra – but some operators accept this as a necessary cost of doing business.

But she can see the risk that the decline of oil and gas will occur faster than the growth of new energies. This risk is greater as renewable energy projects generally slip back through lack of funding or firm government policies.

"We need to retain all the skills and competencies when very few projects are moving forward" she says. "We must 'mind the gap'. Not everyone is at the same place but there are, in an emerging market, opportunities where we will position ourselves. There is a strong value proposition to optimising CCUS and hydrogen but the supply chain needs to be competitive to attract investment and provide confidence in UK projects.

"The carbon border adjustment mechanism will be helpful as it is a huge opportunity to capture emissions, including those from the European Union that may be transported to the UK, pending resolution of the legal situation on handling waste products," she says.

Projects in some low-carbon sectors, such as CCUS, have been slow to get off the ground as developers need certainty of supply and emitters need certainty of storage or utilisation; a route to market of their CO<sub>2</sub> and both need to see the respective state-backed guarantees. The new government has a mandate to unlock investment to push projects to final investment decisions. The hope for ASCO and the dozens of companies with projects in limbo is that the years of testing, planning, negotiating and waiting will soon yield final investment decisions.



ThuyTien Le Guen Dang

# Data – a new defence against accidents

## FC Labs explains how its technology can reduce the risk of workplace mishaps

**W**onderful though it is, the human brain occasionally nods and alertness levels drop. Usually these lapses pass unnoticed by anyone else; but occasionally, on a construction site or an oil rig, for instance, the consequences can be disastrous and widespread. In an emergency, when human performance is put to the test, resilience to these lapses is particularly crucial. This resilience can be understood and improved by measuring the risk of human error.

Today, about 9% of the global workforce is involved in construction, but productivity lags behind other sectors. Profit margins are minute, cost of rework can be a quarter of total project costs and labour is scarce. This leads to cutting corners and heavier workloads. Industrial accidents can result from split-second lapses of concentration. While the offshore sector in the UK has had very few of these overall, the commonest ones result from slips & trips, dropping an object, being hit by a moving vehicle or falling from a height.

Statistics show that human error is a direct contributor in over 90% of incidents and many more near misses. Sleeplessness and fatigue are major causes, with stress, burnout and environmental factors (such as unusually high or low temperatures) at work being amongst the others.

Another result is that among the workers who are on site each day, barely two thirds are fully productive. So there is little room for important but costly improvements in health and safety. Once safety goggles and hard hats have been issued, regulation and technology can only go so far.

Believing that prevention is better than cure, FC Labs' founder Mat Norbury began working on a head-worn wearable device for use with existing hard hats and other headgear. This device, part of FC Labs's BrainFit platform, is capable of reliably measuring what FCLabs defines as 'brain fitness', encompassing an individual's mental wellbeing, brain health and cognitive ability.

This lightweight, low-cost device uses near-infrared light to measure blood flow and oxygenation levels in the pre-frontal cortex area of the brain. FCLabs' algorithms process this data, providing a real-time measure of brain fitness in the form of a simple, user-friendly metric; what they call your 'CoreScore'. BrainFit delivers a real-time, objective risk assessment,

identifying when low or impaired brain fitness might mean mistakes and accidents are more likely.

BrainFit is, with a cloud-based software platform delivering data, insights and suggestions to both individuals and management. As well as regular reporting, support is available on demand, including 1-1 brain fitness training for individuals. BrainFit empowers individuals to unlock better brain and mental health, wellbeing and performance and helps businesses to improve safety, productivity and sustainability.

BrainFit's algorithms don't just monitor risk. They can predict it as well. The more data it has, the better the software can determine an individual's baseline metrics and likely fluctuations. "It becomes more reliable the more data we have for a specific individual. We've learned that some individuals are more resilient than others," Mr Norbury told OEUK.

### Keeping the flow going

Although BrainFit has been built to use data from FCLabs' own wearable device (what the company calls BrainFit+), their research identified that even when all that the algorithms have is heart rate, it is still possible to provide an indication of brain fitness.

While not as accurate as the head-worn device, devices worn on the wrist can gather heart rate data to provide a rough indication of brain fitness. This has allowed FCLabs to start brain fitness trials earlier with a wider group of participants across many industries and geographical locations; FC Labs has used commercially available wrist-worn devices including FitBit, Garmin, Oura ring and Apple Watch to collect the data for these trials. Integration with intrinsically safe devices is in the pipeline. "The data is what matters, not the form the device takes," he says.

Alongside the CoreScore measure of brain fitness, BrainFit provides insights into three main factors affecting it – sleep, stress and physical activity levels. Ongoing research, including field tests in an upstream project in Indonesia, aims to both further validate the solution's efficacy and build on these diagnostic capabilities. This includes identifying when a specific factor might be at play, such as temperature, air quality or drugs and alcohol.

Although it might be seen as intrusive, employees have embraced BrainFit. Many feel that their employer



Mathew Norbury, founder & CEO

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**"Our primary aim was not to make a major oil company more profitable; I wanted to have a positive impact on society and keeping people safe and well."**

should do more to keep them safe and well. The platform has been designed to ensure individuals feel in control of their own data and that consenting to their employer using it, whether anonymised or not, is all about their safety and wellbeing. We've already seen many individuals taking part in trials at work wanting to continue using BrainFit in their personal lives.

By its nature these high risk, 'hard hat' sectors are male dominated (latest figures show that over 80% of the oil and gas workforce are men) and men are not inclined to admit to weaknesses, either for reasons of employability or of pride.

This is where FCLabs' unique approach and data comes in. BrainFit makes measuring and managing your

brain fitness as easy and acceptable as your physical fitness. "People talk about their physical health and fitness all the time. Just spend time in any gym – it's all personal bests, training plans and protein shake recipes. Calling it brain fitness puts mental health in the same bracket as physical fitness. We've seen it countless times already. People (not just men) almost immediately starting to talk to each other about their brain fitness data and what's affecting it. They don't know it, but they're talking about their mental health," said Mr Norbury."

"Our primary aim was not to make a major oil company more profitable; I wanted to have a positive impact on society and keeping people safe and well. But as a rule, men do not like disclosing their weaknesses in vague terms. That is how we came up with the notion of brain fitness and the 'CoreScore'. BrainFit provides employers with incredibly useful data and insights that they've just not had before. If you can measure it you can manage it. If you can predict it you can prevent it. But really BrainFit is all about behavioural change. It's about increasing self-awareness and encouraging individuals to look after themselves better."

#### **Q&A**

*Q: Does the data collected allow for the accurate interpretation/prediction of the near future, as well as present brain health? Does it give clues to the wearer's likely next actions or altered states such as epilepsy?*

*A: Trends indicate likely near and longer-term future changes in brain fitness unless checked by behavioural change (eg sleep, exercise, manage stress). We don't currently specifically identify next actions, moods or conditions such as epilepsy however this is on our mid-term roadmap once we have enough data to do this.*

*Q: Would it record the aftermath in the wearer's brain of drug or alcohol (D&A) abuse?*

A: We would see fluctuations in brain fitness but do not specifically identify the reasons for them. If low brain fitness flagged by us was a concern then testing for d&a could be part of next steps for the employer to identify and address specific factors. Just as important, on an individual self-awareness basis, we help people understand how D&A affects their own brain fitness.

*Q: What is the position regarding these headpieces? Could they become compulsory in the workplace?*

A Employers and main contractors/clients are within their rights to mandate use of our technology as part of employment or other contracts. We doubt if any but those working in the riskiest environments will do so initially. Some push back from individual users / unions is to be expected, so we are focused on designing a product which makes workers feel in control of their data and that they can share it in order to help keep them safe and well. We aim to avoid working with employers who might misuse this data in any way.

Offshore energy, construction and logistics have shown the most interest in the product so far, because of the high-risk nature of the roles in their areas.

The solution could however also be within financial reach of amateur psychologists too (and provide good training for anyone looking to go into neuroscience as a profession!) But that is a more consumer-focused product which we are not focused on at present.

*Q: Will the headpiece feed back into a central database?*

A: Yes. Ease of integration and interoperability is key. And, to preserve data privacy for the individual, this

data can be anonymised. This can still be useful for analysis and integration with other data sets.

*Q: What does FC Labs expect to gain from its OEUK membership? Have you seen interest in your equipment from any named or anonymous companies?*

A: This is frontier technology, which businesses and individuals are not familiar with. We are hoping to drive awareness and education across the sector and to work with the OEUK and members to run trials, establish best-practice and to help participating individuals and companies experience the benefits this proactive approach to human risk can bring.

*Q: I note the very impressive cost and personal health benefits your headpieces have brought. Could you provide more details?*

A: We do have some data which shows positive behavioural changes and we are looking to use the trials to strengthen the link to operational errors, downtime and burnout. Existing stats for absenteeism, presenteeism etc suggest we'd have a significant cost saving and productivity impact.

*Q: How broad is your geographical reach? What is the business profile of your typical customer?*

A: It is global. Our clients tend to be large and medium-sized employers in high risk 'hard hat' sectors who may also have operational and support teams working in lower risk areas such as in offices. Our research shows that businesses can benefit the most by applying BrainFit in stages, perhaps starting with office or high-risk workers, and gradually scaling up to cover the wider workforce and management."





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### OEUK Industry Manifesto

The UK offshore energy sector is essential for the economic and environmental prosperity of our country. Our brilliant, skilled people work tirelessly to produce the energy from off the coast of Britain that powers not just our homes, transport and industry, but the everyday products we need to live well.

We are proud to make a huge contribution. Oil and gas production alone added over £20 billion to the UK economy in 2022/2023. The offshore energy industry provides over 200,000 good, skilled jobs across the length and breadth of the UK. We provide secure and reliable energy to millions.

By choosing a homegrown energy transition, we can protect skills, secure investment and maximise sustainability.

The UK's offshore energy sector has the potential to:

- 1** Contribute to an energy transition which leaves no individual, community, or sector behind.
- 2** Secure over 200,000 high value jobs in the UK whilst growing the skilled and diverse workforce of the future.
- 3** Deliver £200 billion of private investment over the next decade, spurring economic growth and fostering UK technology and innovation across the energy mix and meeting around half of the UK energy needs by 2030.
- 4** Meet the UK's net-zero commitment by 2050 or sooner, decarbonising offshore energy production to power homes and businesses across the breadth of the country.

Collaboration is at the heart of success. To realise this potential, we need all parties to work with us and our people to deliver the following steps:

**We are Offshore Energies UK  
Read our 2024 industry manifesto**



# Keeping oil & gas flowing

Helping to meet today's energy  
needs from the North Sea



# Developing green hydrogen

In partnership with  
Aberdeen City Council

Aberdeen Hydrogen Hub is expected to start production in 2026.  
This is a digitally rendered image of what the site could look like.

## And, not or.

### **That's how we're backing Britain.**

While today we're mostly in oil and gas, we increased the proportion of our global annual investment that went into our lower carbon & other transition businesses from around 3% in 2019 to around 23% in 2023.

[bp.com/AndNotOr](https://bp.com/AndNotOr)

