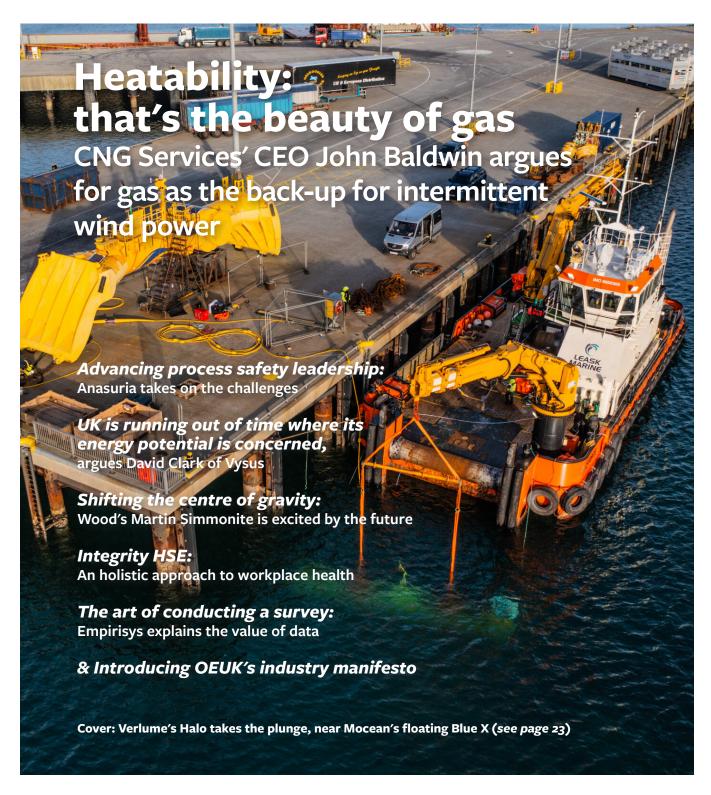
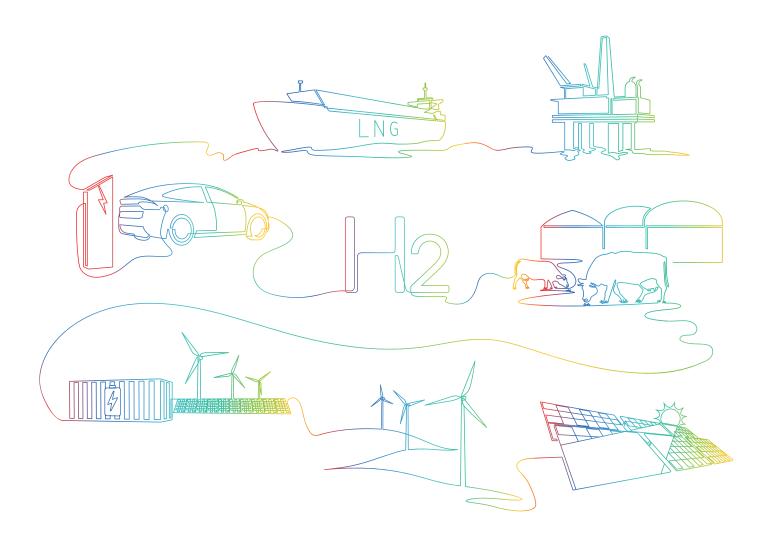
SOFFSHORE BENERGIES

The quarterly magazine for the UK offshore energy industry

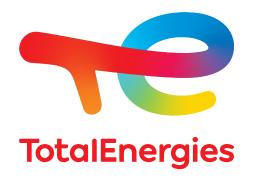




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Welcome to Offshore Energies UK #58

his issue of OUEK magazine comes shortly after the Labour Party announced that it would drop its plan to borrow £28bn/yr to finance the energy transition this decade. It also coincides with the second anniversary of Russia's invasion of Ukraine. Having to switch from cheap Siberian pipeline gas to expensive imports of LNG was the biggest cause of Europe's continuing cost of living crisis. And in common with other European countries, the UK has to think very carefully about tax and public spending.

The US, for whom practically endless supplies of cheap, domestic gas have been a given for a decade or two, is also facing an election. After that, the giant economy might take a more protectionist approach to its own manufacturing sector. Forward gas prices are very low but LNG export plants are still lined up and they are generally designed to operate for decades. As demand for feedstock grows on the Gulf Coast in particular, will US industry watch uncomplaining indefinitely as exports grow? The US might not prove the long-term, dependable alternative to Russia that some European states had hoped.

The UK general election is still months away but many of the salient facts – the depressed state of the economy and the mood of the general public – might possibly have even worsened by then. Inflation, for some necessary goods, is high and most consumers are spending less as mortgages and rents rise. With that in view, OEUK has produced an industry manifesto: a document that sets out our industry's aspirations to bring about material, positive change for the country, based on what is achievable based on its own experience and skills (see opposite page).

Whoever wins will face a colossal challenge: how to finance the energy transition in a way that is acceptable to the electorate. High-voltage cables, low-carbon generating capacity, new plant and pipelines to capture emissions at the factory gate and transport them offshore will all be needed in sizeable quantities. The public will need reassurances that their taxes are being spent on economically viable aims.

The private sector will have to invest much as well, not just on materials but on retraining and recruiting. So while there might be £200bn of capital forthcoming in theory, in practice it will want stability (see also p34). Subsidies will be needed to guarantee cost recovery from investment in new energies over a sensible period. And for a global approach to the transition, we are happy to point readers to a new book by law firm Stronachs (page 18).

One area for optimism is the truth that necessity is the mother of invention. Research and industry are constantly pushing back the limits of what was thought possible, as even the flawed ChatGPT has shown. This after all is a sector whose products underpin or enhance practically every human need and is at the forefront of innovation.

This magazine has long championed the ingenuity with which many of our members interpret a wider variety of precisely measured data, from below and above the seabed, over ever shorter periods. More hydrocarbons are being extracted and at lower cost than would otherwise be the case as a result.

Predictability of asset life, maintenance needs and so on has brought huge rewards that were previously beyond the reach of technology (page 42). Physical assets such as drones also help reduce emissions, time and risk to life and limb through remote monitoring with state-of-the-art sensors.

These initiatives have taken on new urgency with energy security and cost high on the agenda. Safety and the environment is another important area for our members. It is encouraging to see that the market can accommodate new entrants in this sector too if the USP are strong (page 46).

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OEUK launches industry manifesto

A 'homegrown' approach will boost the nation's economy

Offshore Energies UK has launched an industry manifesto in readiness for the general election. Among other ideas it contains a list of essential proposals for the incoming government, whichever party it might be, as the country ramps up the homegrown energy transition and the drive for net zero.

Most of Europe is suffering from the conflict between the twin goals of decarbonising industry on one hand and maintaining economic growth on the other.

The manifesto, which has already created ripples among policy-makers, industry, domestic media and beyond, offers a blueprint to speed up progress towards the transition by triggering £200bn of new investment in the sector, half of it in oil, gas and decommissioning expenditure and the other half in wind, hydrogen and carbon capture and storage.

The proposals (see below) show how a cohesive investment push can radically reduce greenhouse gas emissions, protect jobs and training opportunities and promote energy security by focusing on domestic production rather than importing more oil and gas.

The manifesto shows how OEUK members can contribute to an energy transition which benefits entire communities in every sector of the economy.

It sets out a strategy that will give long term security to the existing jobs at the same time as growing the skilled workforce of the future.

The £200bn of private investment that

could be in the spending pipeline for the next decade will spur economic growth and technological innovation for new methods of energy generation, while providing the impetus to meet around half of the UK energy needs by 2030.

It will also enable the UK to meet its net-zero commitment by 2050 or sooner, decarbonising offshore energy production to power homes and businesses.

OEUK argues that this transition must be supported by a committed government strategy. It also needs a skills passport that recognises the transferable expertise of oil and gas workers moving to new jobs in the renewable sector.

The energy industry also needs a tax regime that excludes one-off, targeted taxes for one-off events, provides long term predictability for investment, and is internationally competitive to attract and retain businesses in the UK, the manifesto says.

In addition, it calls for an independent statutory body with the powers and resource to oversee the delivery of UK energy objectives.

OEUK CEO David Whitehouse said: "This manifesto is the culmination of many months of collaboration with our members, stakeholders and consultation with the wider public.

"We are all completely committed to the transition to green energy but we need new investment to achieve it and we also need people to recognise that this transition cannot be achieved by shutting down the oil and gas industry and importing the fossil fuels we still need."

Net zero: what the offshore can bring to the table

Contribute to an energy transition which leaves no individual, community, or sector behind.

Secure over 200,000 high value jobs in the UK whilst growing the skilled and diverse workforce of the future.

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.

Message from our CEO



David Whitehouse CEO, Offshore Energies UK

The waters of the North Sea have provided the backdrop to decades of oil and gas production which is one of this country's greatest energy success stories. As we stand on the brink of a new chapter for the North Sea, we must work together to unleash our potential, and power our future.

Decisions that will be made by our politicians, regulators and policy makers today will be felt for decades to come. This year will be an important year for our sector and for our members at OEUK. We have this wonderful opportunity to create significant economic value, support highly skilled jobs up and down the country and protect our energy security, all while showing climate leadership. Our ability to deliver a domestically successful energy transition will fail if we undermine the industries, workforces, and communities whose skills will be vital for building our energy future.

UK offshore energy companies could invest £200 billion in homegrown energy production this decade alone. This investment will deliver 50 gigawatts of offshore wind, 10 gigawatts of hydrogen, and at least four carbon capture and storage clusters, while also supporting homegrown oil and gas production and meeting our decommissioning commitments.

Our sector has shown exemplary resilience. Parliaments may thrive on opposition and argument, particularly in an election year, but big engineering projects only succeed through collaboration. It is clear that the most credible path to successfully tackling energy affordability, security and delivering on our climate goals, whilst creating high value jobs is by pulling people together, breaking down barriers and demonstrating we can be a trusted and responsible partner to the UK economy.

OEUK will be releasing its Business and Supply Chain Outlook Report in March. A successful energy transition has the biggest potential to deliver the economic growth this country needs. Our Report will look to outline the 'homegrown energy opportunity' and the factors which will shape the sector in the coming decade.

Skilled jobs. Secure energy. A sustainable future, and a sustainable journey too. Let's work together to unleash our potential, and power our future. Let's choose a homegrown energy transition.

Dan Stalon

Net zero

CCS will need tens of thousands of jobs: Ofgem

On a visit to companies in northeast England mid-January, the CEO of Britain's energy market regulator Ofgem, Jonathan Brearley, said tens of thousands of new jobs would be needed to underpin the carbon capture and storage (CCS) industry.

"It's inspiring to see such ambitious, innovative projects taking shape in Humberside and Teesside, which will help to create thousands of jobs and are critical to achieving the government's target of decarbonise the power system by 2035, and reach net zero by 2050.

"The gas crisis, as much as the climate crisis, has shown the need for building our energy security from volatile international gas markets. Our role at Ofgem is to unlock investment and

accelerate signing off infrastructure and facilities to ensure everyone can benefit from a net zero system as quickly as possible, at the lowest cost.

"These CCS and low-carbon projects will play a key role in delivering this cheaper, more secure and cleaner energy system for the country, and these apprenticeships and trainees will be going into the wide range of new, highly-skilled jobs needed to realise the net zero energy transition," he said.

Under the Energy Act 2023 (see p7), Ofgem will be responsible for regulating the transportation and storage networks of CO2 in the UK, as it is for natural gas networks. The new networks will be part of the infrastructure needed for CCS

NSTA urges more electrification of offshore installations

The North Sea Transition Authority (NSTA) told industry colleagues at a February 20 meeting that more platforms had to be electrified.

"The North Sea has long been a testbed for pioneering technologies and right now we need innovative solutions to crack the significant challenge of electrification, cut emissions and accelerate the transition," the NSTA's supply chain head Bill Cattenach told the delegates.

"Operators and technology suppliers should continue to engage and pursue appropriate solutions. The NSTA will continue to support these efforts," he said. "This workshop has shone a light on some of the options available for brownfield electrification. and work to establish clear regulatory pathways."

Power generation made up 79% of UK offshore production emissions in 2022, and diesel or gas-fired plant is the commonest. Electrifying new and existing platforms could deliver carbon savings of up to 22mn tonnes by 2050, says the NSTA.

Last year it sent out for consultation a draft plan whereby operators would

need to evaluate the technical and economic case for electrification – and investments must be made to electrify assets where it is reasonable to do so.

Eleven operators delivered presentations outlining the significant engineering challenges they face with brownfield projects. They then attended breakout sessions with technology suppliers to learn more about the technologies available to support the projects.

In the central North Sea, CNOOC International is working on plans to electrify the Buzzard platform, while a consortium of BP, Shell and TotalEnergies is focusing on installations in the Central Graben Area. Electrification options are also being explored West of Shetland.

As well as wind, wave technology is also an option, as this magazine reports. Seabed power storage and distribution harnessed to a floating generator has caught the attention of financial investors and also to a number of companies who are trying to find ways to decarbonise the operation of their subsea wells (see p23).

UK 'leading the way on emissions cuts'

The UK is the first major economy to halve its emissions since 1990, the government said February 6. At the same time, its economy grew 79%. This compares with a 23% reduction in France and no change in the US between 1990 and 2021. The UK also cut emissions faster than any other G7 country over the last decade.

With renewables now accounting for more than 40% of the country's electricity – up from just 7% in 2010 – this shows the UK is leading the way on cleaner energy, it said. Much of the reduction came from reducing coalfired generation, a one-off feat, and not something that nuclear-heavy France was in a position to achieve. In 2012, coal provided almost 40% of UK electricity, but later this year, this will be zero.

Since September alone companies have announced plans for £30bn of new investment across the energy sector, including to advance green technologies and support green industries.

The UK plans to cut emissions by 68% by 2030, which is more than the EU, Japan or the US.

Energy Security Secretary Claire Coutinho said: "The UK is the first major economy – of the top 20 countries – to halve its emissions. This is an enormous achievement by itself but also because we have done this in a pragmatic way – growing our economy by 80% at the same time and protecting family finances."

Despite greenhouse gas emissions rising in some sectors from 2021 levels, as the UK continued to recover from Covid-19, 2022 saw an overall fall of 3.5% since 2021 and of 9.3% since 2019.

These statistics show the UK is making significant progress towards net zero. While statistics from recent years remain impacted by the unprecedented economic impacts of the coronavirus pandemic, the long-term trend shows that UK is rapidly driving down emissions - meeting and exceeding its carbon targets, the government said.

New law promises reliable deliveries of cleaner, affordable energy

The Energy Act 2023 has received Royal Assent. It is intended to square the triangle of energy security, net zero and affordable bills in the long-term.

A new tender process will lower network operating and development costs, saving consumers up to £1bn by 2050.

A specific merger regime for energy networks will also be created under the Competition & Markets Authority. This will save households up to £420mn over the next decade.

There are also new measures for smart appliances to prioritise safety and give consumers the confidence to use them to cut energy use and reduce their bills. A smart electricity system could reduce system costs by up to £10bn/year by 2050.

The government is expanding Ofgem's remit to networks for heating, allowing it to limit pricing and improve the service for the half a million heat network customers.

The law includes consumer protections and frameworks, incentivising the heating industry to invest in low-carbon heat pumps. It also includes powers to deliver the smart meter rollout by 2028, yielding savings of another £5.6bn.

Energy Security Secretary Claire Coutinho said the law was "the largest piece of energy legislation in a generation." It would boost investment in clean energy, support thousands of skilled jobs and make the country "more secure against tyrants like Putin." It is also designed to ensure the transition to net zero does not become a costly burden for consumers.

The government is also introducing a licensing framework for CO2 transport and storage to help deliver the UK's first carbon capture sites – supporting up to 50,000 jobs by 2030.

The creation of a new, independent body – the Future System Operator – will ensure consumers can access a secure and decarbonised energy supply, key to enhancing the country's energy security. The FSO will be responsible for systems in the gas and electricity network developing efficiently and keeping consumer bills low.

John Pettigrew, CEO of National Grid, said: "We welcome the passing of the Energy Act into legislation. This is a crucial next step in delivering a secure, affordable and clean energy future, establishing the needed policy and governance foundations to deliver on the UK's net zero ambitions.

"In particular, establishing a Future System Operator will be critical in delivering strategic, whole system energy planning and oversight as we continue to transform our energy infrastructure.

"Only by working together as an industry, with the regulator and government, can we hope to achieve an energy transition that delivers for everyone and an energy system that is clean, fair and affordable for all."

Ofgem CEO Jonathan Brearley said: "It is the most significant energy legislation for a decade and a world-first in giving us a legal mandate targeting net zero. It gives Ofgem the powers to unlock investment, accelerate planning and build the infrastructure the economy needs. This will give us security from volatile world gas markets and end our dependency on fossil fuels."

Hydrogen UK CEO Clare Jackson said the low carbon hydrogen industry and sectors relying on hydrogen for their own decarbonisation journey all welcomed the Royal Assent. The law creates provisions for business models for hydrogen production, transport and storage.

This firmly indicates to the global hydrogen economy and international investors that the UK is serious about its net zero future, and the role hydrogen can play in it, she said.

Low carbon emissions prices, separate EU-UK markets dismay Energy UK

Falling carbon prices on both the UK and the European emissions trading schemes (ETS) make it harder to justify investment in decarbonisation on either side of the Channel (see graph).

But domestic companies could also face hefty tax bills for exporting to the EU by 2026, according to analysis published last October by Energy UK. It wants the two markets to be reunited, which is also OEUK's position. UK introduced an ETS in 2002 and the EU ETS is modelled on it. The UK's high carbon price has helped the UK to halve its emissions since 1990, says Energy UK.

Energy exported from sources like wind, solar and nuclear will however be subject to the EU carbon border adjustment mechanism (CBAM) from 2026, despite being carbon-free, says Energy UK (OEUK #57, p20). This wiil deter investment in UK clean energy – "compounding a problem already exacerbated by a weak domestic carbon price at exactly the moment the UK is struggling to keep up with international competition from other key markets."

Energy UK wants the government to link the two schemes. This would exempt UK companies from the EU carbon border adjustment mechanism, saving billions in potential tax payments,

provide higher revenues for the Treasury, and cut out complex reporting. "We urge the government and the EU to get round the table before UK companies start paying the price," the trade association for the onshore UK energy industry said.



News Scotland

OEUK members set out their views for the First Minister

Scotland's First Minister Humza Yousaf visited Offshore Energies UK's offices in Aberdeen January 15 for a conversation with some of its members. He listened to their hopes for an energy transition that makes the most of Scotland and the UK's oil and gas industry and skilled workforce to build a low carbon future.

The meeting was an opportunity for the offshore energy industry to explain the benefits of a home-grown energy transition: OEUK has identified £200bn of private investment in energy infrastructure that could be unlocked by the end of this decade, if business conditions improve.

Mr Yousaf said his party's draft Energy Strategy and Just Transition Plan made clear how the country would meet its climate change commitments and capitalise on the enormous opportunities that a net zero economy offered.

"I fully appreciate just how important the northeast is for our energy sector and how important the sector is for Scotland's transition to net zero. That is why I value opportunities like this to discuss with industry the detail of their planning to help deliver that transition in a way that is fair and just.

"It is only by working together that the Scottish government and industry can redefine the role of a global energy hub and ensure that offshore energy continues to be an attractive career for the current workforce and next generation of engineers and innovators."

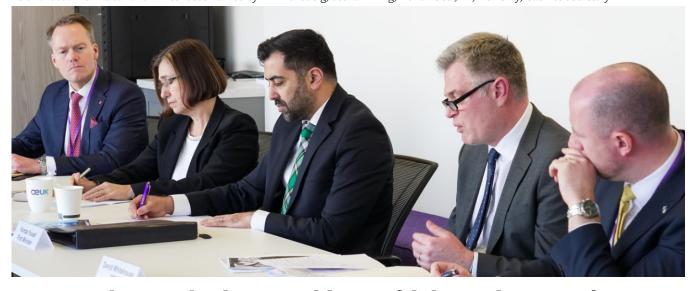
Thanking Mr Yousaf for his attention to the views of the assembled industry leaders, OEUK CEO David Whitehouse said the country had to become an "irresistible place" for business. "Every political party is looking to unlock growth

in the economy, and offshore energy with investment in oil and gas, alongside wind, carbon storage, and hydrogen is undoubtedly the best opportunity for Scotland and the wider UK.

"Meeting more of our needs from homegrown energy produced in the UK means jobs, economic growth, and secure and affordable energy. In a big year for UK and Scottish politics, our message is simple; choose homegrown energy."

The session showed the First Minister that the offshore energies industry is a reliable and responsible partner of the government. It is serious about the energy transition and today's North Sea is changing to get to net zero and take global opportunities. Offshore energy, in particular its supply chain, is increasingly integrated and the workforce and skills are highly transferrable.

Below: Yousaf Humza & David Whitehouse flanked by Erik Ronsberg, Stena Drilling; Doris Reiter, BP; Neil Gray, Cabinet Secretary



OEUK welcomes budget — subject to 'right environment'

Announcing Scotland's budget December 19, the Deputy First Minister and Cabinet Secretary for Finance Shona Robison MSP said the £67mn strategic investment in offshore wind would be a catalyst for further private investment in the infrastructure and manufacturing facilities that are critical to the growth of the sector.

OEUK said the energy announcements could provide a welcome signal to energy companies, which in turn could help unlock future investment and anchor skills if they were underpinned by the right environment.

OEUK External Relations Director Jenny Stanning said: "The decarbonisation of Scotland is one of the greatest opportunities and challenges of our time and will only be delivered through collaboration between public and private capital.

"Policy decisions and rhetoric made today will be felt for decades to come,

so prioritising a transition which is homegrown instead of wholly imported is vital."

She said the announcements were "a step in the right direction."

But it was "essential to have the right investment conditions and environment in Scotland, through supportive policy, that unlocks £200bn of energy investment over the next decade while attracting and retaining the skilled people vital to delivering the transition."

News Hydrogen

National Gas, Fluxys to work together on shipping green gas

The British and Belgian gas transmission network operators, National Gas and Fluxys, agreed in October to collaborate on decarbonisation.

The two countries' high-pressure grids are connected by the two-way Interconnector UK pipeline, now 25 years old. Carbon capture and storage (CCS), offshore wind, hydrogen and harnessing North Sea energy resources such as offshore wind were also areas for joint work.

National Gas Projects CEO Jon Butterworth said the agreement would help secure the future of some kinds of industry and also fuel growth and innovation.

Fluxys Belgium CEO Pascal de Buck said: "Multiple strong partnerships are essential in our focus area of developing open-access infrastructure. We see an array of opportunities in pushing up our co-operation with National Gas for the development of infrastructure to further connect both markets in a decarbonised world, creating a hydrogen link between our systems and possibly other options for achieving

large-scale decarbonisation."

Among their possible plans, following a memorandum of understanding signed December 14, is a hydrogen link, unlocking North Sea hydrogen for mainland Europe.

For cost reasons, blue hydrogen, produced from UKCS natural gas will be the first generation of hydrogen technology on any useful scale.

Following Russia's invasion of Ukraine, in its 2022 REPower EU proposal, the EU unveiled targets for 10mn tonnes/yr of domestic hydrogen production and to import the same amount by 2030.

A report by Westwood Consulting on November 17 said the Netherlands and Belgium would be the front-runners in terms of achieving the EU import target, with 6.2mn tonnes/yr between them. Fluxys Belgium is developing large-scale hydrogen and CO2 corridors for transport in and through Belgium. This would help ensure the potential for the UK to import continental hydrogen

Their agreement was synchronised with the UK government's financial backing for 11 major projects to

produce green hydrogen, the suppliers being guaranteed a fixed price.

The Department of Energy Security and Net Zero said the successful projects would invest over £400mn in the next three years, generating more than 700 jobs in local communities across the UK and delivering 125 MW of new hydrogen for businesses.

These customers include Sofidel, which will replace half the methane its gas boiler consumes with hydrogen at its South Wales paper mill; InchDairnie Distillery in Scotland, which plans to run a boiler on 100% hydrogen; and PD Ports in Teesside, which will replace diesel with hydrogen in its vehicle fleet.

The financial backing was part of its extended Hydrogen Strategy Update to Market and came as part of a slew of documents including in-depth strategic pathways for hydrogen production; and transportation and storage networks.

Some scientists and economists argue that the cost of transporting hydrogen safely makes it uneconomic and the gas should instead be produced at the industrial sites where it is needed.

Project Union and methane blending

National Gas has initiated Project Union with the initial aim of connecting green hydrogen production in the Humber region with end users in Teesside. Ultimately it could be a 2,000-km network, equivalent in length to a quarter of Britain's national transmission system, although methane has a higher calorific value and is cheaper to transport and store.

National Gas is also involved in the Scottish Cluster based on blue hydrogen production for industrial users and the associated CO₂ transport and storage infrastructure.

Unlike blue hydrogen, which is derived from methane, green hydrogen is produced electrolytically.

National Gas is working on blending ratios with Norwegian certification company DNV. It said: "This is a critical step towards achieving the government's net zero targets for

2050, boosting energy resilience and increasing storage capacity as well as reducing emissions."

Using its former BG-owned pipeline testing site in Spadeadam, Cumbria, DNV said it would deliver a "world-class hydrogen test and demonstration facility for compression systems, that could provide the key evidence to transition the UK network."

It would test hydrogen concentrations from 2%, 5%, 20% and 100%, operating at different flow rates in order to generate conditions seen in the high-pressure grid. And leak monitoring will be completed across the facility and compared across the blends of gases.

Arup sees H₂ grid potential

A report by engineers Arup published in October painted a generally positive picture for hydrogen in Great Britain. But it had to make some assumptions on consumer behaviour. At the request of Ofgem and the National Infrastructure Commission, it looked at three scenarios.

"The evidence that large amounts of the existing network is suitable for hydrogen is unequivocal," it says.

The historical replacement of iron with polypropylene mains means 83% of the network today is considered suitable for hydrogen, it said.

But in order to kickstart the conversion, a lot of the pipelines will have to be built from scratch. It said a hydrogen backbone at transmission level was a crucial piece of infrastructure and the sooner it becomes available, the better for the transition. This would ensure a competitive market for hydrogen and resilient supplies as well as enable industrial switching. "This backbone forms a material part of the costs in all scenarios," it said

Upstream News

Parliament passes UKCS licensing bill

The Offshore Petroleum Licensing Bill passed its second reading in the House of Commons January 21. It garnered support from about 60% of the votes with no Conservatives voting against it. It has since had its third reading.

The bill obliges the upstream regulator, the North Sea Transition Authority, to offer annual licensing rounds, subject to two key tests: will the UK be a net importer of oil, gas and liquids for the following 15 years after the relevant year; and will the carbon intensity of domestic gas production be lower than that of LNG imports?

These are both largely a formality, given that production from the UK continental shelf is declining faster than demand for oil and gas; and average gas production is already cleaner than the present wave of LNG imports.

In the text prefacing the bill, Secretary of State Claire Coutinho (right, courtesy DESNZ) said it was her view that it would not lower the protection that is already provided by any existing environmental law.

Labour and the Scottish Nationalist Party tabled amendments to the Bill but neither passed; and the speech by Ms Coutinho was very supportive of the North Sea industry, calling it an "incredible national asset." She said only an "ideologue" would say that the 200,000 jobs in the UK should be exported and tax revenues foregone: "That is the choice the House must make today: do we support the oil and gas sector and the private investment that comes with it or do we leave taxpayers to foot the bill?"

She said that the country could not afford to lose the skills, the revenue or the investment the sector provides and to do so would put the national net zero emissions target in jeopardy. "We must deliver this transition in a proportionate, pragmatic and realistic way, ensuring that we make the most of the energy we produce right here in the UK," she said.

The minister for energy security and net zero, Graham Stuart, said that not having new licences in the UK would

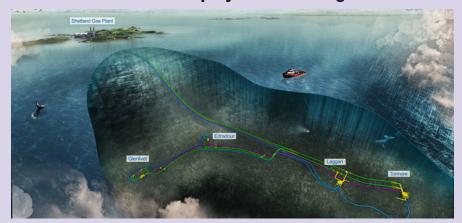


make no difference to national hydrocarbons consumption but it would affect our bills and import dependency.

A Conservative MP, Douglas Ross, said "The businesses that are looking to expand offshore wind and the windfarms for tomorrow are staying solvent today because of their revenues from North sea oil and gas."

Fellow Conservative Richard Drax said that given the Energy Profits Levy it was surprising that companies had not already withdrawn. He urged the government to find pragmatic solutions to the transition to net zero and to allow the private sector to provide jobs and prosperity, "not least in Scotland."

NSTA licenses tie-back projects following substantial offshore interest



The North Sea Transition Authority (NSTA)'s 33rd licensing round last year drew more applications than any since

the Innovate licences round in 2016-17. It received 115 applications from 76 companies for 258 blocks/part-blocks, it

said October 30. North Sea producers snapped up 27 new licences, in areas that have been prioritised because they could start up soon as tie-backs.

They include the Shell-operated Victory field, which will be tied into the Greater Laggan Area (see page 22; graphic left), which is good news for the owners of the capacity in the seabed assets. Another six blocks are ready to be offered and have been merged into five existing licences.

There are 284 active oil and gas fields in the UKCS and an estimated 5.25bn boe in total projected production to 2050.

A recommendation for the remaining 203 blocks will follow further assessment of the habitat regulation process.

Upstream News

NSTA welcomes greater use of tech in war on emissions

The North Sea Transition Authority (NSTA) has reported that the demands of net zero emissions and the focus on production have given rise to 1,200 new technologies.

Digital twins, infra-red cameras for detecting methane leaks and gas recovery were among the specific examples cited in its January 26 document. Facilities management, aided by aerial drones and self-driving subsea vehicles, has seen the most innovation. But there has also been significant growth in the areas of installations and topsides, and reservoir and well management.

NSTA Technology Manager Ernie Lamza said that companies were taking an innovative approach, as shown by the continuing development and use of the new technologies the report highlights.

"World-leading technologies, skills and experience boost production and support the energy transition, placing UKCS workers and companies in a great position to secure work and deliver products and services in the UK and in other producing regions around the world," he said

Since 2021, net zero technologies have risen from 60 to 140 in 2023; while data and digital have doubled to 381. Decarbonising has been sped up by the use of hybrid power systems, waste heat recovery and electrificationenabling technologies.

The industry is a hotbed of innovative thought, with exciting new ideas being implemented in the areas of seismic and exploration, well drilling, construction, plugging and abandoning and subsea systems and facilities decommissioning.

The focus on security of supply is clear from the reservoir and well management section of the report. It highlights the adoption of advanced modelling techniques and water shutoff systems, alongside other techniques to improve recovery."

Operators committed £200mn to transfer spending - buying technology from suppliers - and £65mn to their own research and development, beating 2022's £156mn and £49mn respectively.

OEUK explains its message to politicians

OEUK CEO David Whitehouse met Rachel Reeves (far right) and Shadow Chancellor of the Exchequer and Shadow Financial Secretary James Murray in late February. The objective of the meeting was to share the concerns of our companies and people over the future of the UK's offshore energy sector, face to face. Labour's latest plans for an extension of the windfall tax weigh heavily over the sector so it is important that the Shadow Chancellor takes the dialogue

seriously and leaves the door open for future discussions, which she has.

OEUK also met the Scottish First Minister Humza Yousaf (see p8) and will meet the Secretary of State for Energy Security and Net Zero Claire Coutinho as this issue of the magazine goes to press. We are committed to constructive engagement with all political parties. OEUK has held summit meetings with representatives of more than 400 companies in our sector whose output

supports more than 200,000 UK jobs. Companies investing in new floating offshore wind, carbon capture and and storage and hydrogen projects depend on a stable and predictable oil and gas business for revenues to fund investments.

With supportive policy in place, the opportunities for the sector are huge - skilled jobs, economic growth and a sustainable future. There are exciting opportunities here that must be seized in this general election year.



Awards

OEUK Awards: celebrating the best of the offshore energy industry

OEUK's 2023 Awards winners were honoured November 30 at the P&J Live in Aberdeen as the industry celebrated the top talent of the UK's offshore energy sector.

The awards, sponsored by Shell UK, champion those who have made an extraordinary impact on the industry in the past year.

Over 450 people attended the event, which was hosted by the renowned radio and television presenter Gabby Logan MBE (right), who added a

certain something of her own to the proceedings. As one delegate said, "Gabby has a fantastic sense of humour and her hosting hit just the right tone, helping to break up some of the more technical parts of the event and adding that something extra for our guests."

A total of 31 entrants made it as finalists after an expert panel considered over 110 nominations from across the sector. Attendees also live-voted for the Neighbour of the Year winner: the company best exemplifying exceptional

corporate social responsibility and community engagement.

OEUK CEO Dave Whitehouse said: "As these awards show, the expertise of our people is driving innovation in clean energy solutions across the board. This sector is determined to create a sustainable future...

"Congratulations to those people and companies who have shown exceptional dedication and talent this year and who will take the offshore energy industry forward into its exciting future."

	2023 winners					
	Apprentice of the Year	Nicholas Taylor, Harbour Energy				
Supply Chain Company of the year Equality, Diversity and Inclusion		Jaye Deighton, Peterson Energy Logistics				
		Harbour Energy				
	Outstanding Contribution, Decarbonisation	ASCO				
	Outstanding Contribution, Energy Security	Kellas Midstream				
	Neighbour of the Year	Global E&C				
	Supply Chain Company of the Year (Large)	Peterson Energy Logistics				
	(Small/Medium)	Imrandd				





Paul Rushton, Global E&C; Jaye Deighton, Peterson Energy Logistics; Nathan Morgan, Kellas Midstream; Innes Auchterlonie, IMRANDD; Thuy-Tien Le Guen Dang, ASCO; Mavis Anagboso, Harbour Energy; Sarah Bolson, CNR International UK; Nicholas Taylor, Harbour Energy

Awards

Decom 2023: awards showcase innovation

The OEUK Awards followed hot on the heels of the OEUK Awards for Excellence in Decommissioning, held on November 21.

The gala dinner event was part of the annual conference in St Andrews and had six shortlisted entries.



For decommissioning, the criteria cover the project's execution, design, innovation, health & safety issues, cost performance and other areas.

Centrica's upstream joint venture Spirit Energy won the operator category, sponsored by PDi. It was praised for its work on the giant Morecambe gas fields.

The company has identified the future potential of these fields as a carbon storage site: they met much of UK winter demand and will provide a permanent decarbonisation solution. They can take up to 1 GT of CO_2 .

Utility ROV Services was announced as the winner of the supply chain category, sponsored by the North Sea Transition Authority, and hailed for making a significant commitment to the North Sea.

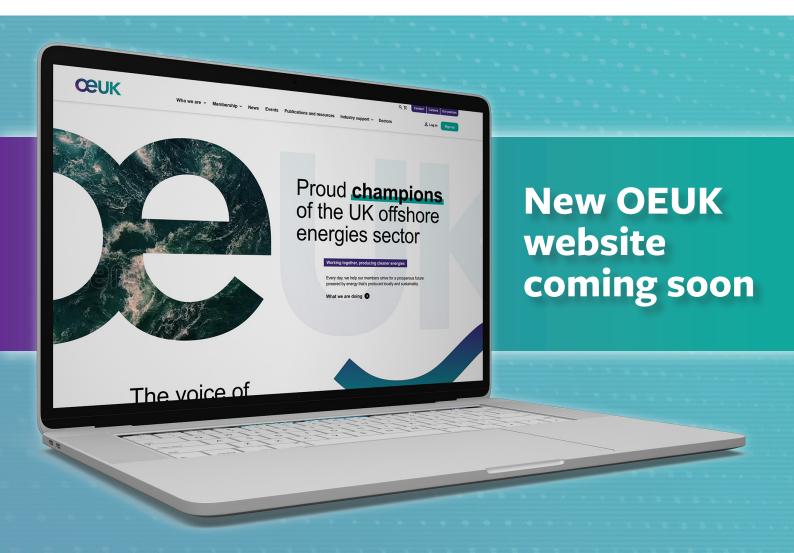
The company has invested heavily in next-generation tooling to enable a 30%

cost reduction when performing subsea infrastructure removal.

OEUK's Decommissioning Manager Ricky Thomson (*left*) said the calibre of nominations and finalists was "fantastic" and they were "all a real reflection of the great talent and expertise of our energy communities – those that personify the innovation the North Sea decommissioning sector has become known for.

"I am delighted to see this recognition of their accomplishments in decommissioning, all while driving industry toward its net zero goals and transitioning the UK towards a sustainable future," he said.

The awards were presented by Kirstie Langan from PDi (sponsors of the operator category) and Pauline Innes from the NSTA (sponsors of the supply chain category).



Conferences

Integrity comes to the fore at OEUK's annual HSE Conference

OEUK held its annual conference on health, safety and the environment in February 8. Sponsored principally by TotalEnergies with Harbour Energy and CNOOC in support, its theme was 'integrity' and it was open to broad interpretation.

OEUK CEO Dave Whitehouse highlighted the fact that the broad industry has to be able to demonstrate integrity in its stewardship of resources, protecting people and the environment. The director of energy at the Health & Safety Executive, Samantha Pearce, reminded the industry of its commitment to the principles of Process Safety Leadership (see also p38) and asked industry whether the frequency of hydrocarbon releases and the overall size of the maintenance backlog reflected well on its adherence to those principles.

TotalEnergies' HSE director Mhairi Finnie described the French major's significant efforts to reduce its backlog, but said the company still had some way to go, as it faced the risk of some serious maintenance-related incidents.

For Ms Finnie, integrity entails knowing that the efforts are being directed at strengthening the weakest points. Attendees also heard from the offshore installation manager (OIM) for major upstream producer and event sponsor Harbour Energy, Stuart Milne; and CNOOC's OIM John Weston. They agreed that safety interventions should start with onshore teams and that offshore work had to be simplified. Mr Milne also highlighted the importance of mental health support for the offshore workforce (OEUK Magazine #57, pp 36-41).

The conference then divided into three parallel technical sessions: Health, Safety and Environment. This model ensured that each stream was given equal emphasis, although the quality of presentations and topics meant it was often a challenge to choose which session to attend.

The environment session addressed regulatory awareness, environmental risk management in front-end engineering and design, the electrification of offshore installations and environmental leadership. Then it progressed to a consideration of broader themes around the circular economy and sustainability.



The safety session focussed on shared learnings about personal safety, including the substitution of humans with drones, robots and remote operated submersibles. These can manage safety intelligently and ensure effective safety investigations, before taking a view on whether there is a risk of a major accident hazard.

The health session took its lead from Harbour Energy in considering the broad health and wellbeing of the workforce as crucial to safe operations, ranging from the elimination of back-pain to getting a great sleep to combat fatigue. It also advocated taking a clinical, risk-based approach to managing the risks of mental health.

The attendees were energised and empowered by psychiatrist Dr Tharaka Gunarathne who explained that brain science could be utilised for looking after you and each other for better wellbeing and improved team performance. Everyone took home something powerful from this session that could improve health, safety and environmental protection at the workplace.

Throughout the day there was a focus on wearable-tech, software and artificial intelligence all promoted as a way to reduce human error, and simplify administrative processes to ensure that humans are inserted where they can deliver the greatest value.



Conferences

Low-key COP28 leaves oil and gas alone — for now

Opec member Abu Dhabi hosted last year's COP, giving the producers a chance to air their views on the energy transition. Generally the petroleum exporters' voice was measured, conceding that decarbonisation is important but so too are oil and gas, not least in enabling the transition.

Opec's World Oil Outlook predicts oil demand in the petrochemical sector to rise by 4.3mn b/d from 2022 to 2045. In a November 30 communique, the cartel pointed out the dependency of renewable energy infrastructure on petroleum products – and not just for transporting the components and associated manpower from factory to seabed.

This is a paradox: how can you call for more investment in wind energy while calling for an end to spending on the materials essential for building the turbines, it asked.

A wind turbine is made of steel (66%-79% of total turbine mass); fibreglass, resin or plastic (11%-15%); iron or cast iron (5%-17%); copper (1%) and aluminium (0-2%). Fibreglass, resin and plastic are all petroleum-derived products and have no substitutes at the scale needed.

Similarly for crystalline silicon solar panels: they are about 76% glass, 10% plastic polymer, 8% aluminium, 5% silicon, 1% copper, and less than 0.1% silver and other metals. Petrochemical products like ethylene are used in the copolymers that cover the photovoltaics, Opec said.

The Gas Exporting Countries Forum, which has similar membership, said the world will need more, not less, gas as populations grow, economies expand and living conditions improve. Indoor cooking with biomass produces harmful particulates that clog lungs and shorten millions of lives.

But it recognised that the environmental profile needed to be improved. Better operational and energy efficiency, reduced flaring and methane emissions and a big increase in carbon capture and storage capacity are all goals.

Net Zero Technology Centre launches TWB

Aberdeen's Net Zero Technology Centre (NZTC) used the occasion to launch its Technology Without Borders (TWB) initiative. This is intended to enable countries to work better together to reduce emissions: it is agreed that setting limits to the development of the Global South would not be equitable.

It will facilitate technology transfer between the developed and less developed world – Global North and South respectively – enabling local adaptation and building technical expertise and improving supply chains. It has set as its goal for this year five key projects, with rapid scaling up planned for consecutive years.

NZTC's CTO Luca Corradi said: "Moving the next generation of technologies that can address climate change from low technology readiness level to commercialisation needs to be prioritised globally. The TWB initiative will promote economic development opportunities during the energy transition, ensuring that nations can address poverty, energy access, and climate change simultaneously.

"Under the United Nations Framework Convention on Climate Change, developed countries are obliged to promote, facilitate, and finance technology transfer to developing countries. However, success requires a collaborative approach."

The TWB was also welcomed by UK political circles. Scotland's secretary for net zero Màiri McAllan said: "COP28 must listen to the voices of the Global South and those affected most by climate change. That is why we welcome the launch of the TWB initiative, which follows the Scottish government's £90mn Aberdeen City Region Deal investment in the NZTC. And the minister for Scotland Malcolm Offord said: "We must all do our part to ensure developing nations are not bearing the brunt of climate disruption... I encourage all partners to consider joining the programme."

Opec World Oil Outlook foresees net oil demand growth despite decline in OECD

Global oil demand is set to rise from 99.6mn b/d in 2022 to 116mn b/d, says Opec's latest *World Oil Outlook*. The table below shows the predicted sharp divergence of regional oil demand pathways in a selection of OECD and non-OECD regions.

Factors that will limit oil demand include the rate of switching to electric vehicles; fewer petroleum heating systems; a further reduction of oil demand in the electricity sector; and alternative fuels in the marine and aviation sectors.

(Mn b/d)	2022	2025	2030	2035	2040	2045	%+/-
OECD Americas	25.0	25.5	25.8	24.8	23.2	21.5	-3.5
OECD Europe	13.5	13.5	13.1	12.0	10.8	9.8	-3.7
OECD Asia-Pac	7.4	7.5	7.2	6.6	6.0	5.4	-2.0
OECD	45.9	46.5	46.0	43.4	40.0	36.7	-9.3
China	14.9	16.8	17.8	18.2	18.5	18.8	4.0
India	5.1	5.9	7.3	8.8	10.2	11.7	6.6
Other Asia	9.0	9.9	11.1	12.1	12.9	13.6	4.6
Russia	3.6	3.8	4.0	4.0	3.9	3.9	0.3
Non-OECD	53.6	59.6	66.0	71.0	75.4	79.4	25.7
World	99.6	106.1	112.0	114.4	115.4	116.0	16.4

But in Abu Dhabi, in a demonstration of global co-operation, negotiators from nearly 200 countries for the first time recognised the need to transition away from fossil fuels, the UN said.

"Whilst we didn't turn the page on the fossil fuel era in Dubai, this outcome is the beginning of the end," said UN Climate Change Executive Secretary Simon Stiell in his closing speech.

UN chief António Guterres emphasised that the petroleum era had to close but with justice and equity. "Developing countries must be supported every step of the way," he said, wrapping up the event.

Azerbaijan, another country heavily reliant on oil and gas export revenues and planning big increases in the output of both, will host COP29 in its capital, Baku, this December.

Academic

Skills for the Future: Young Professionals event wraps up 2023



Sponsored by Halliburton, OEUK's Young Professionals evening has been a cornerstone for graduates, early-career professionals, and newcomers to the energy sector alike. Chaired by OEUK's executive adviser Fraser Wyness, the speakers at the December 9 event were Bob Greenwood, partner at Odgers Berndtson; and Catherine Allsop, vice-president, subsurface, Equinor. The panellists were Afsana Begum, OEUK business advisor; and Suzie Coull, formerly of OEUK and now

senior wells decommissioning engineer at the regulator, North Sea Transition. Authority. With over 70 attendees, the event focused on skills for the future. The two speakers delved into the essential skills required for the industry's future and emphasised the pivotal role the next generation of talent plays in realising the full potential of the UK's energy transition. The event has become a regular feature for graduates, early-career professionals, and newcomers to the energy sector.

RGU launches new courses

Aberdeen's Robert Gordon University has launched fully-funded graduate apprentice courses for this year. They combine academic learning with handson professional experience. They include an MSc cybersecurity, a BA (Hons) in business management and a BSc in Data Science.

Students will have a unique opportunity to earn a degree while gaining practical skills and industry insights, in collaboration with employers.

A graduate apprenticeship mentor said the courses made a valuable contribution to the workplace from the start and graduates were able to apply their learning straight away. "Compared with a graduate who is having to reflect on past learning which could be as old as four years ago, this seems to be an obvious benefit," the mentor said.

For the full range of courses, visit: Graduate Apprenticeships | Workforce Development | RGU

Production Chemistry Training, Peak Global link up

Production Chemistry Training (PCT) and Peak Global Consultancy have joined forces to give theoretical training courses on production chemistry and process engineering.

The combined theoretical training courses will cater to participants at different stages of their careers.

The entities are committed to delivering engaging learning experiences that equip participants with valuable insights and skills applicable to real-world challenges.

The courses will be delivered by two industry recognised experts: Stephen Heath, Technical Director of Production Chemistry Training; and Dr John Hargreaves, Managing Director of Peak Global Consultancy.

Commenting on the partnership, Mr Heath said the synergy between the two represented "a significant step forward in advancing theoretical training in production chemistry and process engineering. Together, we are dedicated to providing professionals with the tools and knowledge they need to understand how these two critical areas are intertwined and drive success for their organisations."

Dr Hargreaves said the combined training courses would "empower professionals in the oil, gas, and energy sectors with the knowledge and skills necessary to navigate the complexities of production chemistry and engineering effectively."

PCT launches wax courses

PCT in collaboration with Kernow Analytical Technology (KAT) launched in February a unique course focusing on wax, rheology, and deposition theory. The first session took place February 12-15 at KAT's laboratory facilities in Cornwall and mixed laboratory tests with theory, in a ratio of 60:40.

Events



Share Fair, March 20, P&J Live

Hear from operators, developers and contractors about their confirmed activity.

Book one-to-one meetings with the key procurement decision-makers.

Network and promote your business with an exhibition stand - or sponsorship.

The UK supply chain's ability to solve complex challenges underpins a vast diversity of North Sea activity. Whether it is exploration deep below the seabed or assembling immense windfarms, making data visual or creating digital twins, these innovative companies keep the energy flowing and at

They also help to lower the carbon intensity of production through logistics and data sharing. Offshore carbon injection and storage capability will soon be a vital part of the UK energy transition as well.

ever lower cost.

Recognising the vital role these companies play in our national economy and energy security, OEUK, with support from the North Sea Transition Authority, is delighted to help bring the operators and contractors together at our annual Share Fair.

The event showcases and provides visibility of work available upstream. For instance, in the wake of the recent waves of licences – the first of which is aimed at fast-track developments of chiefly gas reservoirs near export infrastructure – new reserves could be producing at plateau within just a few years. So there is a real urgency to source equipment and partners.

Attendees at this year's event at P&J Live in Aberdeen on March 20 will learn first-hand about the contracts that are coming up. Training and recruiting the workforce, expanding their capacity and investing in technology all need an attractive and steadily advancing pipeline of work.

What delegates said about Share Fair 2023:

"Excellent conversations and a real buzz about the place!"

"It was good to see the transition plans of operators... We have an important role to play in their transition journey."

"An extremely worthwhile trip to Share Fair to discuss our products with prospective customers... thanks to all who met us for the 1-2-1 sessions."

For operators, developers and major contractors, it's a great opportunity to broaden understanding of the pioneering products and specialised services offered by suppliers across the UK. Ensuring they have this knowledge helps drive the supply chain-led innovation we need for a successful energy transition.

The new energy companies, such as carbon storage project company Storegga, are also represented at the event.

We have opened bookings for suppliers to arrange oneto-one meetings with procurement decision-makers so they can explore how their products and services can play a part in future offshore energy projects.

We look forward to seeing you there and further information is available on our Share Fair website:

oeuksharefair.co.uk

Companies who will be playing a part include:

Anasuria Operating Company • BP • Ceraphi Energy
•CNOOC • Canadian Natural Resources • Energy Pathways
Equinor • Flotation Energy • Inch Cape Offshore • Ithaca
Energy • NEO Energy • Ørsted • Petrogas • PX Repsol • RWE
Spirit Energy • Storegga • Subseay • TAQA TechnipFMC
TotalEnergies • Well-Safe Solutions • Wood

Book review

A Guide to the New Energies

Stronachs sheds a new light on managing the transition

Scottish law firm Stronachs has published a ground-breaking book on the energy transition that has been put together by a collaborative group of internal and external writers.

A Guide to the New Energies was published through Aberlour Press and it sets out an overview of the energy transition to net zero over the next 20 years. This book is the only one of its kind in the world and there is a free download for all

More than 20 members of staff and consultants worked for over three years on the almost 800-page, 20-chapter tome. The publication of the second, freeto-access digital edition is imminent and a hardback format will follow in early 2024. The book will help people working or interested in multi-disciplinary renewables and other new energies projects gain a holistic understanding of the sector.

The book centres on emerging energies by giving an overview of the technologies, background and policies in play and it aims to spark discussion on key factors including energy security and climate change. The unique publication also explores possible solutions that governments may adopt as part of an

A GUIDE TO THE **NEW ENERGIES**

integrated approach to new energies and the climate.

Ewan Neilson, co-author

The latest edition includes new chapters on project financing, supply chains and contracts, energy storage and lands one year on from the publication of the first digital edition.

Commenting on the book, co-editor and consultant with Stronachs LLP Ewan Neilson said: "On January 9 2024 the Copernicus Climate Change Service (implemented by the European Centre for Medium-Range Weather Forecasts on behalf of the EU Commission) sent out a press release that there had in 2023 been "record breaking conditions such as the hottest month on record and daily global temperatures averages briefly surpassing pre-industrial levels by 2 °C." The summary was: "2023 is the hottest year on record, with global temperatures close to the 1.5 °C limit" beyond which the planet will breach the net-zero emissions limit to control climate change.

"The energy industry in all its sectors from renewables to oil and gas is having to deal with all those issues and find a way through the complexities of

deploying capital into projects meeting net zero targets in the energy transition. A lot of that capital comes from private sources and an internal rate of return meeting certain hurdles is required to be returned to shareholders; businesses and governments alike depend on the deployment of private capital. The deployment of private capital in the next few years is crucial to hitting net zero which has internationally been accepted as the only feasible way forward.

To find out more about Stronachs LLP and the new book: "A Guide

to the New Energies" visit

aberlourpress-renewables.com

"This is a unique publication in that it attempts to bring together, in summary form, some of the most important new energies in Scotland, the UK and worldwide which are being adopted for the future to achieve the goals set out in the Paris Agreement and subsequent

"We are all now going on the energy transition journey to net zero, some at a faster pace than others. The energy transition and a reduction of greenhouse gas emissions is now to be mainstream in almost all countries in the world as governments seek to tackle the climate change," Mr Neilson concludes.

Deloitte.



Balancing the energy trilemma of security of supply, affordability and environment is becoming ever more complex, alongside the need to reimagine use of the world's resources and reinvent our energy system.

We're on a mission to illuminate possibilities.

www.deloitte.co.uk/energy

Market News

Oil demand 'sluggish': IEA

The International Energy Agency predicts oil demand growth will ease from 2.3mn b/d in 2023 to 1.2mn b/d this year. China, India and Brazil will continue to dominate gains.

By contrast, supply this year is forecast to rise 1.5mn b/d to a new high of 103.5mn b/d, it said in its February oil market report.

The publication coincides with the OECD's energy watchdog's 50th anniversary, but despite the apparent surplus, it says, "oil supply security remains as critical as ever."

Extra supply comes mostly from non-Opec+ countries such as the US, Brazil, Guyana and Canada. Opec+ supply is expected to remain flat year on year, assuming extra voluntary cuts announced in January are phased out in 2Q24.

Sanctions and price caps notwithstanding, Russian oil exports rose to a nine-month high of 7.8mn b/d in December, of which roughly half were crude and half were refined products. But the country's estimated export revenues slumped to a sixmonth low of \$14.4bn.

Conflicts in the Red Sea reignited geopolitical concerns but prices dropped in December, with record US oil supply making its way into the Atlantic Basin.

Rising geopolitical tensions in the Middle East, which accounts for a third of the world's seaborne oil trade, has markets on edge at the start of 2024, the IEA said.

Ship owners are continuing to divert cargoes away from Suez and the Red Sea, adding time, insurance and fuel costs – and emissions – to deliveries. In 2023, roughly 7.2mn b/d of crude and oil products and 8% of global LNG trade crossed this major trade route. Africa's Cape of Good Hope extends voyages by up to two weeks. Cushioning any short-term shocks, IEA member countries collectively hold around 4bn barrels, of which over a quarter are government-controlled.

EU 'well prepared' for winter, despite Russian flow

European gas markets were "well prepared for winter;" the European Union's commissioner for energy Kadri Simson said in prepared remarks December 21. As of mid-February, the aggregate for the EU was about 65%. Gas demand was also down (see below).

"Storage levels are very high for this point of the year, the gas prices are at lowest levels since the war started and we are also making progress in diversifying away from Russian imports," she said...

"We expect the total imports of Russian gas for 2023 to be around 40bn m³, roughly divided equally between LNG and pipeline gas. This is half the volumes the EU imported last year, around 80bn m³ of Russian gas in total. We keep under close review the specific situation of Russian LNG imports.

She said the Council and parliament had agreed on the EC's technical suggestion for provisions to allow each member state to limit the pipeline and LNG gas imports in its own networks,

in line with its own security of supply considerations."

She said this was "a proportionate and targeted way to address Russian LNG imports" that member states had to reduce.

At the start of January, Reuters calculated Russia's pipeline exports to Europe were down 55.6% year on year to 28.3bn m³, based on the European Union's gas transmission system operators group ENTSOG. At its peak in 2018, Russia exported some 180bn m³/yr to these markets at much lower prices.

Three emergency regulations covering EU solidarity, renewables permitting and market correction have all been extended for another year as they had helped to lower prices and volatility.

She added that Ukraine "remains a priority focus of my work," as the Council is to open talks on accession talks. To help Ukraine cope with this winter, a fund has been collected that was above €400mn, she said.

Europe's gas demand dips

Natural gas demand in OECD Europe fell 7% (35bn m³) in 2023 to its lowest level since 1995, nearly all of the fall coming in the first nine months, according to the IEA. The power sector accounted for three quarters of the reduction owing to lower electricity demand and expanding renewables and nuclear. Distribution network-related gas demand fell by an estimated 7% (over 10bn m³), mostly in Q1. Non-weather-related factors hitting demand in the residential and commercial sectors included efficiency gains, administered gassaving measures, fuel switching, heat pumps, behavioural changes and affordability. These factors may persist beyond 2024.

Electricity demand fell an estimated 3% (or 90 TWh) in 2023, with energy-intensive industry energy efficiency gains and behavioural changes all playing a part. Renewable power

output rose 8% and 15% more nuclear availability in France also helped. Industrial gas consumption rose by more than 10%, as prices dipped: the first-half decline (6% down y-o-y) was more than offset in the second half.

But it was still almost 15% lower than it was in H2 2021. The IEA expects natural gas demand in OECD Europe to go up by a moderate 3% in 2024, as the decline in gas-to-power demand is offset by residential, commercial and industrial sectors.

Gas burn in the power sector is forecast to drop by close to 10% amid the rapid expansion of renewables and improving nuclear availability in France. An assumed return to average weather conditions is expected to increase gas demand in the residential and commercial sectors.

Industry is forecast to keep recovering, but only weakly and this will largely depend on prices.

Member News M&A

Serica farms into Greater Buchan Area

Independent producer Serica Energy has completed its Greater Buchan Area (GBA) farm-in deal with Jersey Oil & Gas (JOG), it said February 26.

Serica may now participate in the re-development of the Buchan field – now called Buchan Horst – and other potential projects in the GBA.

Last November it agreed to buy a 30% stake, leaving JOG with 20%. NEO Energy remains operator with 50%.

JOG said the transaction brought material value, leaving it with a fully funded 20% interest in the project.

Serica CEO Mitch Flegg said the deal not only gave Serica a significant interest in the proposed project but also potentially added a third production hub to its assets (see also p24).

He also said the low-carbon-intensity asset was "the sort of project the UK needs as part of the energy transition."

Production is planned for late 2026 and to peak at around 35,000 b/day with gross development costs in the order of £850-950mn.

The value of the deal to JOG was equivalent, *pro rata*, to the farm-out to NEO earlier in the year. Combined, JOG stands to receive \$38mn by the time the field development plan for Buchan has been approved, with \$18mn of that payable on completion.

JOG said that with the acquisition of the Western Isles floating production, storage and offloading vessel which had been announced a week earlier, the chief elements of the Buchan redevelopment plan had been defined. The electrification-ready *Western Isles* FPSO makes the Buchan redevelopment solution the option with the lowest full-cycle carbon footprint.

It is expected to be connected to thirdparty floating wind power development following the Innovation and Targeted Oil & Gas licence awards.

In exchange for its 30% stake, JOG received \$6.8mn on completion, including a \$5.6mn contribution to the cost of the GBA development solution and associated acquisition of the FPSO. It also receives \$7.5mn on approval of the Buchan FDP by the NSTA and \$3mn cash payments on FDP approval of each of J2 and Verbier oil discoveries.

Harbour spreads risk further afield with global E&P acquisition

Harbour Energy, one of the biggest independents operating in the UKCS, is to buy the global upstream assets of German producer Wintershall DEA.

It has agreed a price of \$11.2bn for the reverse takeover of the company, whose shareholders are the German chemicals giant BASF and Russianowned LetterOne, it said December 22. Excluded from the deal are Wintershall DEA's Russian assets, which are now Russian state property. They accounted for about half its output.

In December, after Moscow confiscated its Russian assets, Wintershall DEA said the decree was further confirmation that Russia is "no longer a reliable economic partner and unpredictable – in every respect."

Most of the 850 or so corporate staff in Kassel and Hamburg will not be transferred to the new enterprise either. But included are its carbon capture and storage (CCS) licences in Europe, whose theoretical injection capacity totals some 10mn tonnes/year.

The deal will add 1.1bn boe of 2P reserves at some \$10/b of oil equivalent (boe) to Harbour's portfolio; and more than 300,000 boe/d of production..

With output over 500,000 boe/d and 2p reserves of 1.5bn boe – enough for eight years' production, of which 60% is gas – Harbour will become one of the world's largest and most geographically diverse independents, it said.

It will have material gas-weighted portfolios in Norway and Argentina and complementary growth projects in Mexico. The emissions intensity will also be lower, at 15 kg CO2e/barrel.

Harbour said the deal would "materially improve our cost of capital and enable access to broader and lower cost sources of funding, supporting further growth and additional shareholder returns."

Combined revenues were about \$5.1bn and pre-tax earnings \$3.7bn for the first half of 2023.

BASF, a 72.7% owner of Wintershall DEA, will own 46.5% of Harbour's listed ordinary shares with Harbour's current shareholders owning 53.5%.

LetterOne is not sanctioned but some of its minority owners are subject to sanctions in the UK, EU and US. As such, LetterOne's non-voting shares have no governance rights and while those sanctions apply, LetterOne will have no

representation on Harbour's board.

The deal is subject to regulatory, antitrust and foreign direct investment approvals, as well as Harbour shareholder approval. Completion is expected in Q4 2024.

Harbour CEO Linda Z Cook said that it was Harbour's fourth major acquisition and the most transformational step yet in its journey to build a uniquely positioned, large-scale, geographically diverse independent oil and gas company.

She said: "Importantly, the acquisition also advances our energy transition objectives by shifting our portfolio towards natural gas, lowering our greenhouse gas emissions intensity and expanding our CCS interests into new European markets.

"I am proud of what we have achieved so far – a testament to the skill, hard work and commitment of our people – including our track record of safe and responsible operations and disciplined capital allocation, which have made this acquisition possible."

Pursuing lower feedstock and energy costs, meanwhile, BASF is diversifying into European wind assets. It is partnering with Vattenfall.

Member News E&P

Shell takes Victory FID

UK major Shell has taken a final investment decision to develop its wholly-owned Victory gas field using one subsea well, it said January 17. The field is about 47 km northwest of Shetland.

The well will be tied back to infrastructure at the Greater Laggan Area (GLA), with a new 16-km pipeline. Shell UK upstream senior vice president Simon Roddy said: "The UK North Sea is a critical national resource, providing a steady supply of the fuels people rely on today and strengthening the country's energy security and resilience."

The field will come online in the middle of the decade and at its peak produce around 4.25mn m³/d. Most of the gas is expected to be extracted by 2030.

The additional throughput will help the GLA partners as well. Privately-held producer Kistos said it was "delighted by Shell's confidence" in the field and by the government's support.

Executive chairman Andrew Austin said the field's output would significantly increase throughput at the Shetland Gas Plant, lowering costs and extending the GLA's life.

Harbour eyes Leverett in Q4

UK-based producer Harbour Energy is eyeing first output from the NEOoperated Leverett oil and gas field late this year, following successful appraisal work, it said in a trading update January 18.

Other material UK investments include the Talbot development. Highlights from 2023 include better safety, with total recordable injury rate of o.7/mn hours worked, down from o.8/mn hours in 2022; and the successful start-up of Tolmount East in the fourth quarter. Onshore, the government has awarded its two UK carbon capture and storage projects Track 2 status. Harbour has awarded front end engineering and design contract for one of them, Viking; and the project has also secured its first potential CO2 shipping customer, it said.

Deltic farms out half its Selene stake to Dana

Deltic Energy has agreed to farm out to Dana Petroleum a 25% interest in Licence P2437 in the gas-heavy southern UK North Sea gas basin containing the Selene prospect, it said in a February 7 stock-exchange announcement.

This leaves Deltic with a 25% interest in the licence, of which Shell is the operator and third shareholder. Deltic will have no exposure to 2024 drilling and testing costs based on Shell's estimates of success case well

Dana will pay Deltic \$500,000 in cash on completion, covering Deltic's costs to date; and it will carry Deltic for its residual cost exposure to the Selene well. Dana will pay its 25% share of costs from January 1, 2024. Shell expects to drill the well, in a region close to the depleted giant West Sole and Ravenspurn gas fields, in Q3 2024. The same rig, Valaris 123, will also drill Shell's Pensacola well, another Deltic farm-out.

Completion of the Selene farm-out is conditional on obtaining consent from Shell and standard regulatory consents from the North Sea Transition Authority.

The Shell-Deltic Pensacola joint venture has now finalised the positive well investment decision on Licence P2252 and approved the 2024 work programme and budget that allows for drilling an appraisal well late 2024.

CPR agrees on Pensacola

A competent person's report (CPR) for the Pensacola Zechstein Reef estimates gross P50 hydrocarbons initially in place of 326mn boe, Deltic Energy said January 19. It said this figure was in line with its own estimate of 342mn boe.

The report, by RPS Energy, came up with two valuations for the field: a gas-only option, or a more capital-intensive combined oil and

gas development. RPS estimates 2C contingent resources, net to Deltic, of 21.8mn boe in the combined case and 15mn boe in the gas only case. In both cases, production from the southern North Sea field would be piped to Teesside.

Subsequent to the CPR work, appraisal well data from the analogous Crosgan Zechstein discovery has been released.

This supports the potential for thicker, higher quality reservoir across the crest of Pensacola.

Shell, operator of Licence P2437, has informed Deltic that the geotechnical site investigation works on the preferred surface location of the Selene exploration well have been successfully completed and the vessel has been de-mobilised from site. The low-risk, high-impact well remains on track to be drilled in Q3 of 2024.

Selene is one of the largest unappraised structures in the Leman Sandstone fairway and Deltic estimates its gross P50 prospective resources of 318bn ft3 with a geological chance of success of 70%.

Deltic 'carbon neutral': CNB

The company has been certified as a carbon neutral business by Carbon Neutral Britain, it said January 3. Its Scope 1-3 emissions were assessed for the year ending October 31, 2023.

All of its corporate emissions have been offset through independently verified carbon offsetting projects.

Deltic CEO Graham Swindells said that Deltic "takes its obligations to the environment and the North Sea Transition Deal seriously, and this independent audit of our corporate greenhouse gas emissions footprint and Carbon Neutral Certification is an important step in that process." He said Deltic would continue to monitor and, where possible, reduce its corporate footprint.

Member News M&A

Ithaca takes all Cambo

Oil and gas producer Ithaca Energy has completed its acquisition of the remaining 30% stake in Cambo from Shell, taking its stake in Cambo to 100%, it said November 30. The transaction was announced September 12: the stake in the UK's second largest undeveloped field had been offered to third parties since the summer, following Shell's decision not to proceed with the project in late 2021.

In its stock exchange statement, Ithaca said the acquisition has minimal near-term cost exposure, with the consideration payable on the earlier of first oil; and the receipt of proceeds of any subsequent sale of a working interest in Cambo by Ithaca Energy. It is subject to Ithaca proceeding with final investment decision (FID) and the upstream regulator North Sea Transition Authority granting development consent.

The company's then CEO Alan Bruce said Ithaca was "now in a stronger position to engage with potential farm-in partners to enable the future progression of the project to FID."

Mr Bruce left his post wth immediate effect in early January to pursue other opportunities. He has been replaced on an interim basis by the CFO lain Lewis until a successor is in place. The search has started, Ithaca said January 5.

Maersk absorbs Resq

A subsidiary of Danish industrial firm AP Moller-Maersk, Maersk Training (MT), has begun rebranding as it integrates Norwegian powerhouse, Resq. The union solidifies MT's position at the forefront of safety training and emergency preparedness globally, it said in an October 16 statement.

With five safety centres across Norway and a catalogue of over 70 course titles, Resq has played an indispensable role in enhancing safety and emergency preparedness in the North Sea and beyond. Resq said that the rebranding was a natural progression and would deliver the best of both worlds to its clients.

TotalEnergies farms down Seagreen stake

major TotalEnergies and Thailand's state-owned upstream company PTTEP have agreed the £522 (\$689)mn sale of a 25.5% equity stake in the 1-GW Seagreen wind farm offshore UK. Following this farm down, TotalEnergies retains 25.5% of Seagreen, alongside PTTEP (25.5%) and SSE Renewables (49%). TotalEnergies has partnered with PTTEP in oil and gas production projects in Thailand for decades but this deal marks their first partnership in renewable energy production (see also below).

TotalEnergies said the deal implies an enterprise value of \$4.3bn, or 13 times its expected average pre-tax earnings over the next five years.

Seagreen is the world's deepest fixed -bottom wind farm and it has been fully operational since October 2023. It consists of 114 turbines.

In addition, TotalEnergies and PTTEP have signed a memorandum of understanding to explore joint

opportunities in the development of renewable energies.

"After a long history of partnership in gas production in Thailand, we are delighted to welcome PTTEP as a shareholder partner in the Seagreen offshore wind farm alongside SSE, which marks a first step in our collaboration with PTTEP in renewable energies. This transaction is a new milestone in the implementation of our transition strategy and will contribute to reaching our 12% profitability target in Integrated Power business", said TotalEnergies' chairman and CEO Patrick Pouyanné.

"PTTEP is also very delighted to extend its partnership and collaboration with TotalEnergies in offshore wind as well as other potential renewable energy to foster mutual business growth in the future. The success also marks a significant step for PTTEP in diversifying into the high-growth potential clean energy sector for a sustainable future," said PTTEP's CEO, Montri Rawanchaikul.

IOCs farm into Renewable Subsea Power trials

TotalEnergies and Shell have become the latest companies to invest in the Mocean-Verlume Renewables for Subsea Power (RSP) trials offshore Orkney.

Wave energy-to-power project Blue X attracted plenty of financial interest over the summer and autumn. Its biggest single public funding came in September from the European Union's EuropeWave programme: £3,2mn.

The £2mn trials off Orkney, have been financed at least until spring, by which time the operators expect to be able to derisk the commercial and technical aspects.

Operating oil and gas production wells and CO2 injection wells are both possible applications for this kind of zero-carbon and moveable offshore technology.

Commenting on the latest entrants to its project, Verlume said: "It is fantastic that TotalEnergies recognises the value of this data and has come on board" and: "It is great that Shell is now joining the project, a company that we have been working with for some time."

The RSP programme connects Mocean's 10-kW Blue X wave energy prototype to the Halo underwater battery system, developed by Aberdeen intelligent energy specialists Verlume.

Their other backers include Thai upstream company PTTEP, Baker Hughes, Serica Energy, Harbour Energy, Transmark Subsea and Aberdeen's Net Zero Technology Centre. They have paid equally to fund the trials.

As of November 13, Mocean announced it had raised £2.2mn from existing and new investors. These include the venture-capital arm of shipping giant MOL, MOL Plus; and Norwegian Katapult Ocean, which has an accelerator programme to progress decarbonisation technology.

MOL Plus believes Mocean "has a great potential of growth," with a "strong team of advanced initiatives and rapid implementation of their Blue Star project."

Dundee-based TEXO Engineering & Fabrication agreed in March 2023 to act as Mocean's preferred fabrication assembly and load-out contractor.

Member News in brief

People

Serica CEO, CFO leave

Serica Energy's CEO Mitch Flegg has announced his plan to leave the board after the company's 2023 financial results are published, the UK-focused producer said February 1. His interim successor is David Latin, the board chairman.

Mr Flegg had run Serica for six years, his achievements in that time including the acquisition of a string of assets from BP in 2018 (Bruce/Keith/Rhum) and Tailwind Energy in 2023.

Mr Flegg will remain as an adviser to Serica until after the annual general meeting, planned for June. The search for a new CEO will be led by the chairman of the nominations committee Malcolm Webb and an external adviser.

Serica said Mr Flegg left the company "in its best ever health, very well positioned to deliver full value from its assets and exploit opportunities in the UK and beyond."

And CFO Andy Bell retired early this year after almost two decades at the company, to be succeeded by Martin

Copeland, previously at energy advisory firm Kirk Lovegrove & Co.

Paying tribute to Mr Bell, who handled the above BP acquisitions, Mr Flegg said he had given him "unstinting support and sage advice" since he became CEO in 2017 and thanked him "enormously for agreeing to stay on to provide support during the CFO transition and to complete the work of creating an integrated finance function following Serica's acquisition of Tailwind" - which Mr Copeland was personally involved in from the other side of the deal.

Mr Copeland has over three decades' experience of oil and gas financing and advisory roles in investment banks. Other related highlights include advising Premier Oil on its reverse takeover by Chrysaor to create Harbour Energy; and advising JX Nippon on the sale of their UKCS business to NEO Energy.

Vysus appoints regional managers

Vysus Group, the global engineering and technical consultancy, has appointed managers to its leadership team in the interests of a more holistic, regionally focused approach.

Khaled Hamd is now VP for the Middle East and India. He has held posts in construction, management, testing, inspection, certification and compliance in other companies, ranging from project manager to CEO.

Angel Casal, who first joined the company more than 15 years ago, has been promoted from business manager, Spain to VP Consulting, Europe. Also promoted is Remi Martini, VP Consulting for Scandinavia; and Vishal Lagad, VP Consulting for the Americas.

Vysus Group's Senior VP of Consulting, Thomas Aas Saethre, said: "It is always pleasing to see long-serving colleagues develop their careers and move into leadership positions and I look forward to working with the new leadership team as we continue to drive forward our growth plans in 2024 and beyond."

Well-Safe Services appoints energy transition manager

Well-Safe Services has appointed Alexa Duncan as its first energy transition manager. Ms Duncan, who has over 15 years' experience in project management and well engineering roles for international operators, will be pivotal in the delivery of these energy transition business streams, it said in its October 17 announcement.

She said: "With the North Sea Transition Authority estimating CO2 storage capacity of 78bn tonnes on the UK continental shelf alone, there is a clear opportunity for WSS to apply its considerable expertise when assisting our clients on the journey to net zero carbon emissions.... In addition, extensive growth is also predicted within the geothermal market."

BP confirms Murray Auchincloss as CEO

UK major BP has confirmed ex-CFO Murray Auchincloss (right, courtesy BP) as CEO with immediate effect and with the board's unanimous approval, it said January 17. He continues the long line of internal appointments to the top job.

His interim successor since September was Kate Thomson, the company's senior vice president, finance, for the high-income production and operations department. She is now also confirmed as CFO.

Mr Auchincloss said it was an honour to lead BP. He had been interim CEO since September 2023. His appointment followed a "robust and competitive search process with support from international search advisers."

"The board is in complete agreement that Murray was the outstanding candidate and is the right leader for BP," the company chair Helge Lund said in the stock-exchange announcement.



"Many already know Murray well, and few know BP better than he does. His assured leadership, focus on performance and delivery, and deep understanding of the opportunities and challenges in the energy transition will serve BP well as we continue our disciplined transformation to an integrated energy company."

OPITO names new CEO

OPITO, the not-for-profit global safety and skills organisation for the energy industry, has appointed Stephen Marcos Jones as its new CEO, it said February 5. It described him as a passionate champion of skills, apprenticeships, workforce engagement and the people delivering the energy transition.

He is expected to join OPITO in late March and will replace John McDonald who has led the business since 2017. He

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announced his intention to step down

Mr Jones has represented the UK's energy sector on the global stage for over a decade, most recently as Group CEO at the Association for Consultancy and Engineering (ACE) and its sister organisation, the Environmental Industries Commission (EIC).

He had been a non-executive director of OPITO UK & Europe since 2016 and OPITO International since 2020 until relinquishing these positions in November 2023.

Among OPITO's projects is the skills passport, intended to simplify the transfer of properly trained workers between different offshore trades.

PBS appoints M&O contracts manager

Aberdeen-based engineering, procurement and construction firm PBS Offshore has appointed Adam Mason as its director of general maintenance and operations contracts. It said this "demonstrates PBS' commitment to expanding its presence within the energy industry."

Mr Mason has worked for 24 years in UK and international oil and gas operations at leading service companies and operators on and offshore. The company said that with his extensive background managing complex operations and client relationships, combined with his leadership skills, "he will be instrumental in driving the organisation's continued success."

PBS comprises Ponticelli UK, Brand Energy & Infrastructure Services and Semco Maritime.

Proserv installs GMs in Norway, Qatar

Global controls technology company Proserv now has a general manager at each of its businesses in Stavanger, Norway and in Doha, Qatar.

Rune Christian Godejord, formerly of Baker Hughes Norway and Trevor Ogilvie, formerly Proserv's technical sales manager, have worked in subsea oil and gas and topside controls across multiple regions for a combined 30 years, the company said mid-October.

Proserv has a centre of excellence in Trondheim in central Norway. Mr Godejord will leverage the synergies with the Stavanger office to promote Proserv's augmented controls technology, among other solutions.

Mr Ogilvie, now the general manager of Proserv's Doha office, joined the company more than two years ago as technical sales manager for Saudi Arabia and Qatar. Before moving to Proserv, he was the Middle East operations manager for a leading storage tank specialist.

Proserv, SMS open sampling centre in Malaysia

Proserv and Aberdeen-based sand and erosion analysts SMS have rolled out a sampling service centre in SMS' Kemaman Supply Base in Malaysia.

The collaboration brings greater operational efficiencies, Proserv said in an October 26 announcement.

Corporate

ASCO moves up a gear

logistics and management services company ASCO has set ambitious goals, following last year's acquisition by Endless and the appointment of Mike Pettigrew as CEO.

It wants business profitability to rise 50% over the next five years, with new energies providing the bulk of its earnings by 2030. Carbon capture, ammonia, sustainable aviation fuel and e-methanol are all part of the new picture.

Aberdeen-based Mr Pettigrew says that setting up new sites and facilities at home and abroad was key to extending the company's reach in alternative energies. But it will continue to support the traditional oil and gas industry.

"We're entering a new phase for the company, and growth is going to be at the heart of what we do in both existing and new markets. To do that effectively, we need to optimise our operations, make sure we have invested in our technology, that we're structured properly and that our people are focused on what's important to the business," he said.

Kelly Smith heads decom services

ASCO appointed Kelly Smith as head of environmental services and decommissioning with effect from January 1. She succeeds Chris Lloyd, who took on the role in 2020 and has

TotalEnergies mourns death of Thierry Desmarest

French major TotalEnergies announced the death of Thierry Desmarest on January 10. He was 78 and the cause was complications arising from Alzheimer's.

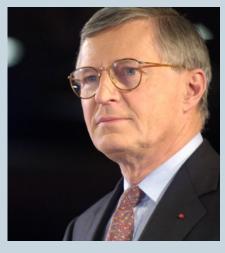
Company CEO from 1995-2007, his major achievements included the acquisition of the Belgian company PetroFina (1998), which allowed the subsequent hostile takeover of the much larger Elf Aquitaine in 1999.

The deals propelled the company into the world's top privately owned majors.

The latter had a substantial UK upstream and midstream business, its assets including the technically challenging Elgin and Franklin fields and the Interconnector UK. It also had a competitive retail and industrial gas supply operation in the UK, trading as Agas. Following the deals, Total became one of the largest privately held majors.

Commiserating with his family and

friends, TotalEnergies said the upstream veteran was "the man who built our company into a world-class group, one of the Top Five majors. As we enter our centennial year, we would not be where we are today without his vision and strategic thinking."



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decided to retire.

During the past decade, Ms Smith has held several roles in ASCO's environmental services line, including environmental business advisor and UK technical manager for the department. She took responsibility for the firm's waste transfer stations in Great Yarmouth and Peterhead and maintained business and customer compliance.

AKE shares the learning

Global risk consultancy AKE International has launched AKE Community, it said October 26. For £50/year, it will make affordable and security, political and economic risk analysis accessible to all.

AKE team member Claire Fleming said: "This year marks the 20th anniversary of AKE's intelligence team and of our country risk platform, Global Intake. This has encouraged a lot of discussion about everything our team has researched, covered and analysed in the last two decades - which is a lot!

"Our clients come from such diverse backgrounds both in terms of sector and the resources available to them. As a team, and as part of this anniversary year, we wanted to proactively make our analysis as accessible as possible."

Verlume meets ORE standards

Clean energy system designer Verlume has been assessed 'competent, capable and competitive' by Offshore Renewable Energy (ORE), it said January 8.

The Aberdeen-based company enrolled in ORE Catapult's 'Fit For Offshore Renewables' programme in late 2021 and presented to the certifying panel in November 2023.

Verlume had worked with the ORE Catapult team to enhance and improve systems, processes and knowledge across the company.

Verlume is expanding its workforce as sales rise fast in offshore renewable markets. It expects to deliver a fourfold year-on-year increase in revenue for the financial year. Its Halo subsea power distribution and storage unit is currently deployed with Mocean's wave-to-power demonostration project offshore Orkney Islands (see p23).

Oilfield Services

Wood lands ETAP work for BP

Engineering company Wood has won a major contract with UK BP to modify the central processing facility at its 25-yr-old Eastern Trough Area Project, it said January 10.

Repurposing existing equipment in the central North Sea complex will be part of the two-year contract to enable the platform's connection to Murlach, BP's two-well tieback development that had government approval last September.

Wood has worked with BP for over 30 years and said it was proud to support the project on a critical North Sea asset. Wood had also done the pre-Feed and Feed work on the Murlach field.

Semco lands Danish gas work

Semco Maritime will play an important role in enhancing gas production from the unmanned Halfdan C production platform offshore Denmark, it said October 4.

Operator TotalEnergies awarded the contract on behalf of its partners in the Danish Underground Consortium. It "represents a pivotal opportunity for Semco Maritime and encompasses an extensive scope of work requiring precision, expertise, and dedication," the Danish company said October 4.

Semco Maritime will be responsible for executing topside modifications on Halfdan CA, the hook-up of the gas lift module, upgrading the design pressure of the liquid export pipeline, supporting topside modifications on Halfdan BB and contributing to pipeline cleaning and testing.

Well-Safe, Spirit extend deal

Solutions Well-Safe (WSS) producer Spirit Energy have agreed the terms for adding a well to the existing scope of the Well-Safe Defender semisubmersible rig, they said November 9.

The operation, whose cost was not disclosed, will add a month to the backlog of the Well-Safe Defender, which mobilised in March 2023 to plug and abandon 14 wells for Centrica's upstream subsidiary.

WSS said the contract award was "an endorsement of the excellent performance of the Well-Safe Defender and its crew," adding that it followed "a summer of international expansion" which added work on carbon capture and storage and geothermal projects.

THREE60 lands perpetual **EPCC** contracts

THREE60 Energy has won two engineering & construction contracts with offshore floating energy company, BW Offshore (BWO), it said January 15. One is for the Catcher floating production, storage and vessel (FPSO) in the UK. The other is for the Adolo offshore Gabon. The contracts involve "complex brownfield modifications through innovative multidiscipline engineering solutions," it said.

THREE60 has supplied BWO with engineering and construction teams that have tackled such problems production enhancement, debottlenecking and obsolescence.

These evergreen contracts are part of a broader global expansion of THREE6o's EPCC service line. This has included delivering services to clients and assets located in 14 different countries throughout Europe, North Africa, west Africa, southeast Asia and South America. The company said: "These two perpetual EPCC contracts demonstrate BWO's ongoing confidence in our global offering and how the benefits of our flexible, agile, and responsive delivery approach have been received in our relationship to date."

ASCO wins Petrofac contract

Global logistics specialist ASCO has won the contract to support Petrofac's emergency response provision in northeast England, it said January 30. The agreement started last year. ASCO will provide specialist HR emergency management, including meet and greet capability from the Port of Tyne. It covers medical or compassionate requirements Petrofac's clients' crew members requiring immediate evacuation. ASCO said: "Our priority is to ensure everyone receives the care they require

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to get home or return to the vessel or platform safely and efficiently, whilst keeping all stakeholders constantly informed."

ExxonMobil, SBM engage Aize for digital twin work

ExxonMobil and SBM Offshore have agreed to deploy Aize digital twin software on the floating production, storage and offloading (FPSO) vessels Liza Unity and Liza Destiny offshore Guyana.

The Norwegian artificial intelligence company helps partners transform the traditional approach to turnaround campaigns by strengthening their experts' ability to work with engineering and associated data within a digital view of the physical facilities.

In February 8 statement, Aize CEO Jarle Skrebergene said: "This partnership presents another valuable opportunity for Aize to showcase the adaptability and relevance of our technology. I look forward to progressing with ExxonMobil Guyana and SBM Offshore, drawing on their experience to enhance our offerings."

Training

3t Training moves into wind

Energy industry training specialist 3t has launched a landmark new partnership with Capital City College Group. This brings a fully funded specialist wind operations training courses to Enfield, north London, for the first time, 3t said November 9.

The bootcamp-style programmes are accredited by the Global Wind Organisation and include courses such as Basic Safety Training, Basic Technical Training, Working at Height, and IRATA Rope Access.

3t has eight state-of-the-art training facilities across the UK and has just completed a helideck structure for training fire-fighting crews at its County Durham emergency response training centre. This was done in a joint venture with County Durham and Darlington Fire and Rescue Services.

And this year 3t extended its offering

to scaffolders, who are in short supply. Successful trainees receive an industry-recognised NVQ level 2 qualification in accessing and rigging, as well as a COTS qualification, CISRS Part 1 and 2 Scaffolding certificate and CISRS Recognised Industry Scheme Card.

Privately owned Gateshead company JTL Scaffolding is among its clients., with around 110 employees.

It said apprenticeships were a key part of investing in its workforce. "We are constantly looking for ways to improve and develop the learning outcomes for our apprentices," it said.

Flotation, Vårgrønn ink offshore wind project plans

Flotation Energy and Vårgrønn, a Norwegian-Italian joint venture, have signed exclusivity agreements for two floating offshore wind developments, they said November 2.

The windfarms – Cenos and Greenvolt – will provide renewable electricity to oil and gas platforms. Displacing diesel or gas, the platforms will cut emissions of CO2 and noxious gases and save fuel.

The windfarms will have capacity of 1.9 GW and will also deliver up to 7 TWh/yr of power to the UK grid. Savings could total 3mn tonnes/yr of CO2.

Hydrogen

Kellas finds first likely buyer for its green hydrogen

Energy infrastructure company Kellas Midstream has signed a preliminary sales agreement with flexible energy generation and storage developer Statera. It covers deliveries of low-carbon hydrogen from Kellas' H2NorthEast project in Teesside for consumption in Statera's Saltholme power stations, they said November 29.

H2NE is a ground-breaking project to build a low carbon, CCUS-enabled blue hydrogen facility next to Kellas' CATS (Central Area Transmission System) gas processing terminal in Teesside (OEUK Magazine #56, p34). It will deliver 355 MW of hydrogen in Phase 1, rising above 1 GW by 2030. It has secured government funding through the Net

Zero Hydrogen Fund.

The Saltholme gas-fired plants are near CATS and provide flexible electricity during renewable power shortfalls. Statera's sites could be the UK's first facilities to be fuelled by hydrogen.

ESG

TotalEnergies partners in emissions cuts globally

French major TotalEnergies has signed a number of co-operation agreements with national oil and gas companies that could lead to methane emissions reductions from platforms offshore Brazil, Azerbaijan, India and Angola.

Petrobras, Socar, Petronet and Sonangol respectively will carry out campaigns using the French major's drone-based AUSEA technology. TotalEnergies is active upstream in each of these hydrocarbons provinces.

The AUSEA gas analyser, developed by TotalEnergies and its research partners, is one of the most accurate technologies in the world in detecting and measuring methane emissions, it said. Cutting methane emissions from hydrocarbon production is a priority in its efforts to mitigate global warming.

Score, Asset55 work on cutting emissions

Global valve specialist Score Group and leading software technology company Asset55 have agreed to collaborate on emissions management, they said November 30. Score's Emissions Elimination Program (EEP) will be integrated with Asset55's 'Operate' digital platform.

Score's EEP reduces operators' environmental footprint, helping them to meet their sustainability goals while also complying with regulations and optimising their output.

Asset55's proven 'Operate' software helps users to monitor their facility's environmental performance, interacting directly with client Enterprise Resource Planning (ERP) systems. This enables real-time collaboration between onshore and offshore project stakeholders.

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Port shows off new capacity

The Cabinet Secretary for Wellbeing, the Economy, Fair Work and Energy Neil Gray MSP visited the Port of Aberdeen January 15 to learn more about developments there. Following its £420mn expansion, the port will boost the economy and support Scotland's Just Transition, the port said January 16. During his visit, Mr Gray (below, second

from left) learned about the port's evolution into a world-class marine logistics hub for the offshore wind industry.

The briefing covered a proposed multimillion pound dredging project which will enable floating wind operations, which the Scottish government is backing.

Mr Gray said the port was "a hugely important gateway to Scotland's

economy and a catalyst for growth in energy, trade and tourism in the northeast and across the country."

Port of Aberdeen CEO Bob Sanguinetti (far left) said the port now could support 17,500 jobs and deliver £2.4bn gross value added but only if the oil and gas industry remained strong. "An abrupt decline could severely impact the port," he said, which is what some now fear.



Proserv, Synaptec plan charity bike ride

Global controls technology company Proserv and power system monitoring specialist Synaptec have agreed to undertake a gruelling six-day bike ride starting on June 7. The aim is to spotlight mental wellbeing and raise significant funds for two leading UK charities: Mental Health UK and Mind.

Cyclists from the two companies will set off from Proserv House in Westhill, Aberdeen and finish at Proserv's Centre of Excellence in Great Yarmouth, averaging 100 miles/day, raising £100,000 in the process.

A cross-section of employees from the two companies will take part in the 32-person event, including Proserv CEO Davis Larssen.

Aker to study Mongstad emissions

Aker Solutions is to carry out a feasibility study into reducing carbon emissions at Equinor's Mongstad refinery on Norway's western coast, it said February

The scope includes a new greenfield facility to produce blue hydrogen from natural gas and refinery fuel gas, along with a carbon capture and export solution. It also covers a new facility to produce sustainable aviation fuel from municipal solid waste with more than 70 % reduced emissions.

Aker said it was "excited to support Equinor on this truly transformational study," as decarbonisation is very high on the agenda.

"The Mongstad study will help to

further accelerate Norway's energy transition, transforming the country's only remaining oil and gas refinery to create energy sources of the future," it said. The site emits some 1.7mn tonnes CO2/yr.

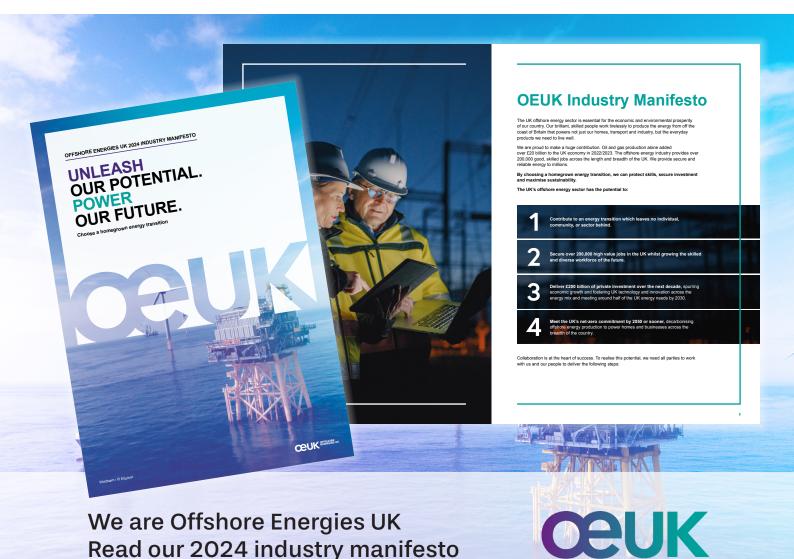
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Guest column

Heatability – that's the beauty of gas

Grid decarbonisation has become a polarised debate. But using green gas solves two problems: power grid capacity and carbon, writes CNG Services' CEO John Baldwin.

y professional interest in gas as a fuel goes back a long way, but most relevant is the time spent from 2011 onwards trying to help would-be shale gas developers make progress in Lancashire.

My view was that gas should be produced and taxed to fund good stuff: I had a plan for heat pumps and home refurbishment in Blackpool. But we did not do that and UK industry is now heading to Texas; fertiliser manufacturing has already gone; and now the energy culture wars have stopped any sensible debate.

These wars extend to the electricity versus hydrogen argument with such things as "time to decommission the gas grid."

The problem has been presented as a binary choice that we will decide in 2026 - should we electrify everything; or should we have a hydrogen grid?

Energy is complicated and decarbonising an economy burning over 800 TWh/yr of gas is difficult, especially when there are occasionally very cold and still winter days (known as the Dunkelflaute: dark doldrums).

The reality is that, in a democratic society with private housing, few politicians will want to ban gas central heating in existing homes. Cold is deadlier than heat. And there are no examples of villages or districts being moved off the gas grid. There is however, an overlooked hybrid option that breaks free of culture wars. In 2012, I spoke at a (shale gas) conference and said that the UK strategy for electricity was gas, but that we should generate as much electricity as possible from nuclear, biomass, wind, solar and have demand side response and interconnectors in order to burn less gas. And so it has turned out: the UK is using progressively less gas to produce electricity as renewable output has risen.

But some gas will still be burnt. The Hydrogen Business Model assumes factories go from 100% gas to 95% hydrogen with gas back-up. And gas will be used in back-up generation plants. Some of these on the lowpressure gas grid have capacity market payments (from the Electricity Supply Operator) into the 2040s.

By 2035, these gas engines might only operate infrequently and during the Dunkelflaute, if there were no back-up gas, we would have consumers with no heat. And industrial, commercial and domestic customers who cannot (or do not want to) move to electricity alone will also depend on gas. But what gas?

The Climate Change Committee (CCC) is now working towards its Seventh Budget next year and I am focusing on promoting the family of green gases, including biomethane and hydrogen, as a credible and attractive option for helping the UK meet its net zero target by 2050.

A total gas demand of 200 - 300 TWh/yr in 2050 is likely for all the above reasons and green gases is the obvious source of this. By 2035 we can reach 100 TWh/ yr of green gas if we apply ourselves now.

Denmark and France are already showing what can be done with biomethane. Now there is E-methane (made from wind and bio-CO2) and bio-synthetic natural gas (made by gasifying waste and converting the syngas to methane). There is also great potential to import biomethane by pipeline from Ukraine or as part of GB's imported LNG cargoes.

Biomethane plants produce liquid bio-CO2. The catalyst for the next generation of biomethane projects is carbon capture and storage (CCS) capacity. One such company, Future Biogas, uses crops for energy in its Carbon Harvest model. This keeps soil healthy through crop rotation and also captures bio-CO2 from the biomethane production process and sends it to CCS sites such as Northern Lights in Norway or Acorn and Hynet in GB. This is transformational and this industry should be locking away 5mn tonnes/year of CO2 by 2035. The challenge for the Association for Renewable Energy & Clean Technology (REA) is to work up credible annual TWh/yr production levels for all these categories of green gas and submit it to the CCC in 2024. Then it can inform the drafting of the Seventh



Carbon Budget in 2025. The key driver for the CCC in deciding how to allocate resources and incentives is the cost per tonne of cutting emissions.

Meeting peak, not average, demand

The gas industry has a design standard for pipeline capacity: the transporter's licence requires enough to meet demand on the coldest day that could occur over a 20-year period. For their part, suppliers must be able to meet gas demand in a one-in-50 year. The difficulty with a Dunkelflaute is its unpredictability, in that such a winter might never turn up – or it could be next year.

To eliminate the risk of blackouts, there will have to be a Dunkelflaute Standard for Electricity System design. This could involve the lowest wind strength seen in January-February in NW Europe over a 50-year period combined with low temperatures. And if it comes, it will need molecules to generate power.

Using today's gas grid, generation plant and storage capacity makes green gases a relatively low-cost option if we can secure enough of them. As an alternative, you can use pure hydrogen; but for that, there will have to be a vast investment in hydrogen pipelines, centrifugal compressors, salt cavity storage (with very big gas reciprocating compressors) hydrogen pressure reduction stations and hydrogen generation plant.

All these hydrogen assets are technically difficult, but the main issue is that all this expensive plant will hardly ever be used – except for testing once a month to satisfy the regulator.

If the Dunkelflaute occurs just 2% of the time over 30 years, it would be a huge amount of capex and opex for such little up-time. It would be like having Mo Salah on the bench and only playing him a match every season.

Electricity consumers may therefore want to keep

"It would be like having Mo Salah on the bench and only playing him a match every season:" a sports equivalent of using hydrogen as back-up

most of the gas grid intact as the lowest-cost back-up option, along with the existing gas storage, LNG import terminals and gas-fired generation.

It may be feasible for some low-pressure gas networks to be completely replaced with heat pumps or district heating but most may remain. There is already 10 GW of back-up gas generation (and CHP) on the distribution networks in the form of low-maintenance and low-opex reciprocating gas engines. The UK could secure a large resource of renewable gases (including biomethane) that would allow a low-cost Dunkelflaute solution as part of the 200 TWh/yr green gas market.

A green gas grid also helps overcome congestion

as electric vehicles and heat pumps compete for connections to the already straining electricity grid.

It is not clear that CCC and the National Infrastructure Commission have fully appreciated the incredible benefit of CCS alongside biomethane. The old plateau number of 10 TWh/yr looks far too small.

Biogas from anaerobic digesters (AD) will supply around 8 TWh/yr in 2024.

Around 19 TWh of biogas is burnt in combined heat and power plants (CHP) and over three quarters of this should be upgraded to biomethane and injected into the gas grid. The UK can aim for 30 TWh/yr by 2035 from projects with at least 50% waste.

Eventually all bio-CO2 can be captured from these AD plants. It can be sequestered or it can react with hydrogen to make methane: 5mn tonnes/yr of it could be blended with hydrogen to make around 10 TWh/ yr of CH4. AD plants also produce valuable organic fertiliser.

In addition to AD plants, we expect to see green hydrogen produced and injected into the national transmission system starting in 2025 with a volumetric target of 5% by 2035. This indicates around 10 TWh/yr. The gas grid is a key asset for hydrogen, just as it is for other green gases. Relatively abundant green gas also opens up new opportunities for decarbonising.

Using bio-CNG at distilleries in the Highlands, replacing heavy oil, also shows how off-grid energy consumers can reduce their carbon footprint. Other options include off--road vehicles and the 44-tonne trucks sector such as Scania and Iveco which is perfect for bio-CNG but not suited to H2 or electric vehicles.In summary, the growth of offshore wind and solar makes CH4 molecules essential for keeping the lights on during the Dunkelflaute: there is no economic Plan B for electricity consumers. The family of green gases presents an unbeatable option to use existing infrastructure and must play a major role in the Seventh Carbon Budget.

Interim total by 2035	TWh/yr
Existing biomethane (7 TWh/yr) plus food waste, sewage, manures etc	30
Grass, as per Ecotricity	10
Future biogas carbon harvest	10
Liquid biomethane imports	20
Ukraine via pipeline	10
Bio-synthetic gas from woody waste	10
E-CH4 from green H ₂ and bio-CO ₂	10
Green H ₂ into the national transmission system	10
Direct air capture at St Fergus, removing C0 ₂ from unabated gas	10
Total	120

Source: CNG Services

Indicative demand for gas in 2050	TWh/yr
Dunkelflaute: low load factor back up for when wind/solar are down	50
10% back-up for industrial consumers on green H ₂	20
I&C customers with no good electricity/ H ₂ option	30
District heating support	10
Domestic customers with hybrid system	30
Trucks and other vehicles with no good EV/H ₂ option	50
Sustainable aviation fuel	50
Total	240

Source: CNG Services

CNG Services Limited (CSL) provides consultancy, design and build services to the biomethane industry, focused on reducing greenhouse gas emissions. Our efforts over the last decade have produced a material impact, with an estimated 20-year project life reduction in CO2 emissions of 17.5mn tonnes. These have been achieved through a combination of: injecting biomethane into the gas grid; bio-CNG instead of diesel trucks; and developing, designing and building the Highlands CNG Project, decarbonising distilleries. CSL also worked on the Network Code modification to enable reverse compression from the low to high-pressure networks to create more capacity for biomethane injection. CSL is an ISO 9001, 14001 and 45001 approved company and has been certified as a competent design organisation for high pressure UK onshore natural gas pipeline work by DNV GL.



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Opinion

UK is running out of time to unlock its energy potential **Vysus CEO David Clark**

Lack of integrated strategic planning risks condemning the UK energy transition to the 'what ifs' of history. Unless government can bring all the stakeholders into alignment, capital and labour will pursue more certain prospects.

he UK's energy sector risks an unprecedented exodus of skills and investment, the CEO of engineering and technical consultancy Vysus David Clark said late last year.

In a December 7 statement, he said that unless there was a "clear and aligned government strategy on the energy transition and greater industry collaboration," the sector would move away from the UK North Sea in favour of opportunities elsewhere.

Vysus has reduced its reliance on oil and gas by gaining a greater marketing share across the renewables, low carbon, grid and complex process industries. But Mr Clark warns that short-term government thinking and lack of a longer-term, integrated energy/industrial strategy are hindering the UK's competitiveness on the global energy stage and is putting its status at risk.

"As a company, we are less active in the UK in part because of the state of our domestic energy market and the pace with which new energy projects are moving ahead coupled with the uncertain market for traditional oil and gas players. Four or five years ago the UK, and Aberdeen and the north east of Scotland in particular, had the opportunity to again lead the world in providing the engineering expertise and innovation needed to deliver the next generation of integrated, low-carbon energy solutions. Unfortunately, stakeholder misalignment and a lack of a fully integrated, long-term strategy mean that the window to achieve this is rapidly closing with people, companies, expertise and investment going to other

"To unlock this opportunity, before it is really too late, we need to bring together key stakeholders from across the integrated energy sector - within government, at both national and devolved levels, the regulatory bodies, and from across the private sector, operators, developers and the supply chain. It comes down to joined-up thinking across the stakeholders to help give direction and unlock the potential.

"If we can do this, we can establish a long-term strategy and create the environment that will attract the required investment to unlock the potential. The opportunity is there but it won't be there forever, and we need to make this happen to deliver long-term stability. It comes down to joined up thinking across all stakeholders.

"We operate in a global market and as such every investment needs to stack up and compete internationally. Sadly we are some ways behind here in the UK where short-term political positioning, across all sides, has created an environment where the UK is no longer seen as an investment region of choice or certainty."

Mr Clark says this lack of alignment has led to delays in establishing the required infrastructure to enable a

"In the UK, designing the energy grid itself is a major hurdle. There is a complete misalignment between developers, operators, stakeholders, and planners. The energy world is becoming ever more highly integrated. For example, we see the electrification of oil and gas, using renewables to power platforms and the integration of hydrogen for example. Yet, our industry is largely continuing to operate as it has done - in silos. It's about bringing everyone together and consolidating. The last thing we need is more organisations and more bodies being set up without existing ones talking to each other," he said.

Mr Clark's warning about the UK's precarious position on the energy industry's world stage comes as Vysus Group positions itself for further international and sectoral growth. Since the company was established in 2020, the focus has been on supporting the energy transition and helping other complex process industries to reduce risk, optimise operational performance, and reduce their carbon emissions, while also continuing to



support oil and gas clients.

Under Mr Clark's leadership the company has moved from being almost entirely reliant on the upstream oil and gas industry to it now accounting for around 40% of revenue with 60% coming from other streams including renewables, power, and processing industries across its consultancy business, whilst it continues to grow and expand its global footprint and capability.

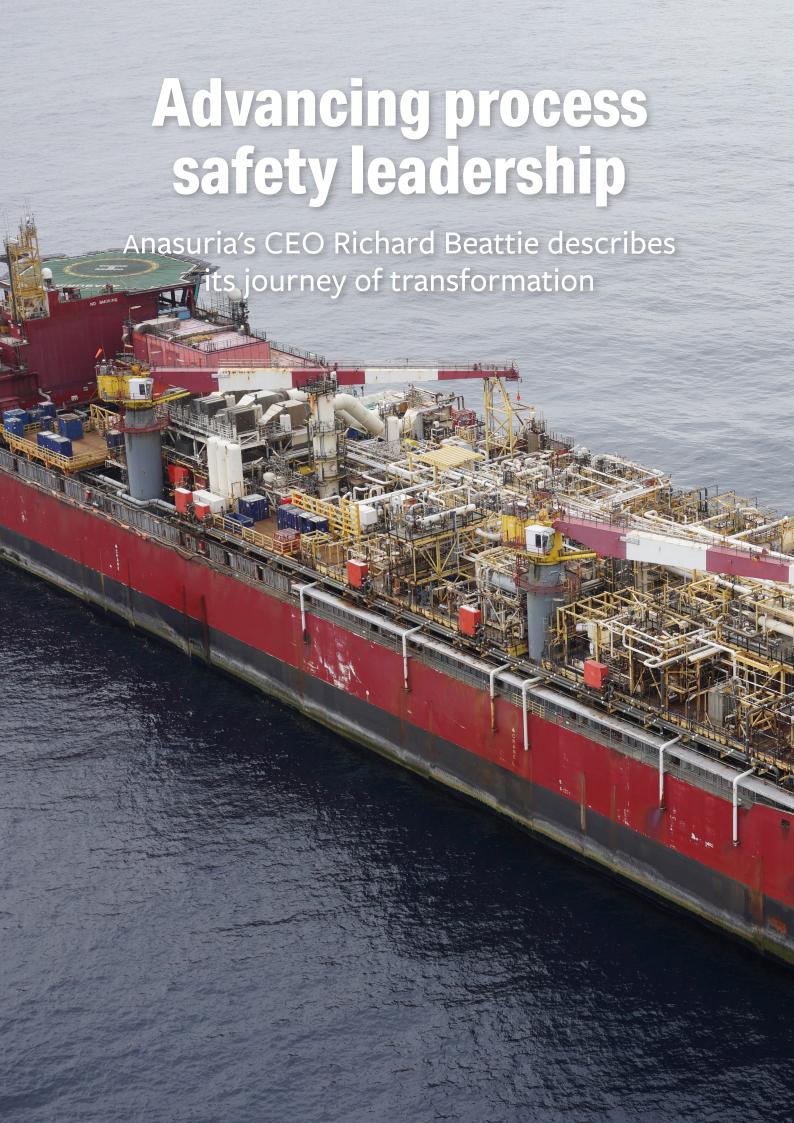
As Mr Clark looks ahead to what the next three years hold for Vysus, the company will continue with its current strategy to provide the technical insights its clients require to solve complex problems as well as collaborating with partners to combine the latest digital technologies with its deep engineering expertise. One example is its partnership with enterprise data sharing platform, Siccar. The collaboration has developed the Energy Transition Databox solution, which uses Siccar's secure, blockchain technology and Vysus' technical engineering experience, and integrates with operational and supply chain systems to allow organisations to easily monitor, manage and verifiably audit their ESG carbon emissions

Mr Clark commented: "The UK continues to have a fantastic level of innovation and engineering and delivery expertise with world-class research and development work ongoing and some great collaboration with universities and technology development centres. While there were encouraging signs in the recent Autumn Statement, the UK's ability to convert the technical innovation and development into real products and projects remains a challenge.

With COP28 underway, and many 2030 near-term milestones rapidly approaching, governments and the private sector need to radically increase the pace of change to get anywhere close to these critical targets.

"Aberdeen and the UK remain key for us and we will continue to invest in our people and skills. However, we have already seen many companies relocate and invest in projects out with the UK. That will only increase without urgent action, and it would be a devastating blow and an opportunity missed if the stakeholders involved don't come together soon to forge collective strategic thinking and a clear plan of exactly what is required to maximise our position within the global energy transition."

"Short-term political positioning, across all sides, has created an environment where the UK is no longer seen as an investment region of choice or certainty."







ince becoming duty holder for the Anasuria floating production, storage and offloading vessel (FPSO) in 2022, North Sea oil and gas operator Anasuria Operating Company (AOC) has been steadily weaving a programme of transformation throughout the entire organisation. From operational improvements and recruitment, to rebranding and an office move, it has been a busy and productive 18 months for the operator, which is jointly owned by Malaysian companies Ping Petroleum and Anasuria Hibiscus UK.

Central to this transformative journey has been a strategic focus on reviewing and optimising AOC's process safety leadership (PSL) operations and planning. This initiative began with a detailed analysis of the original situation which led to a comprehensive overhaul of the company's risk management culture. CEO Richard Beattie highlights the significant progress

made over the past 12 months, emphasising the importance of clear and positive PSL in managing major hazards.

HSE Process Safety Leadership Principles

AOC's vision is to drive efficiency and maximise value for our shareholders by empowering people to excel, innovate and optimise our energy operations in a safe and environmentally responsible way with a strong focus on 'safe and environmentally responsible'. This commitment is deeply rooted in the people, communities and environment that AOC serves. Central to this is fostering the growth of an empowered team.

Since taking on the role of duty holder, we have invested significant time and effort across the organisation. It is my commitment that every individual undergoes process safety training and awareness. We



have revisited and reinforced AOC's values, which serve as the cornerstone of our operations.

The company has undergone substantial changes in personnel, reshaping the organisation and building a team with in-house competence and resilience. This not only establishes, but also demonstrates, our dedication to promoting, implementing, and evaluating a culture of resilient risk management. I genuinely believe that we have formed an exceptionally robust team with diverse backgrounds and experiences, contributing to an exceptional and strong organisational foundation.

As CEO, it is my responsibility to set elevated standards for the development, implementation, and maintenance of company policies, including the Health, Safety & Environmental (HSE) Policy, the Corporate Major Accident Prevention Policy (CMAPP), the Net Zero Policy, and the Security Policy. My main focus is to continue to work closely with our leadership team to ensure the provision of systems and resources for effective management of major accident hazards are in place.

As part of our transition to duty holder, we were already firmly engaged in developing our PSL Framework. Recognising the critical role of leadership in preventing major accident hazards, we actively participated in a focused drive by the regulator to enhance process safety performance. The catalyst for accelerating our progress came in the form of an HSE-led PSL Principles inspection. Contrary to routine inspections, this initiative highlighted the regulator's commitment to fostering a culture of safety and underscored the urgency of effective leadership in mitigating potential risks and ensuring robust safety measures. As leaders, we need to be very aware of behaviours and how we react to 'bad news' - how are we creating a culture where people feel comfortable to speak up when required? Think about how you react to a shut-in or process trip: what questions are you asking of the team, and do its members facilitate correct safety actions and behaviours?

Throughout the past year, we conducted a comprehensive review of existing procedures, assessed

"At the core of managing a major hazard business is clear and positive process safety leadership, crucial for effective risk management."

in alignment with the Energy Institute Process Safety Management Framework. The outcomes guided the development of the AOC Process Safety Improvement Plan, aligning the eight Principles of HSE PSL with the 20 Energy Institute Elements to establish a robust framework.

Lead: The commitment

This framework empowers the senior leadership team to promote and engage the broader AOC team in upholding the fundamentals of Process Safety and the principles of PSL. As part of a continuous cycle of improvement, we undertook a detailed Process Safety gap analysis on our management system, aimed at establishing the Process Safety Improvement plan, devised enhanced Process Safety performance indicators and ensured that the Process Safety assurance and review process were effective.



Photo: istockphoto.com/sturti

Understand: the risks

Key elements of the audit and assurance programme included self-assessments against the eight PSL Principles, as well as interview assessments with Scapa Energy and Empirisys. AOC excelled in criteria related to leadership, commitment and responsibility, workforce involvement, as well as employee selection, placement and competency, health assurance, and stakeholder communication.

Manage: the barriers

We also demonstrated optimal levels of effectiveness in our identification and compliance with legislation and industry standards. Ongoing efforts focus on closing out projects related to hazard identification and risk assessment in a prioritised manner based on our risk register ranking.

Assure: barrier performance

AOC's commitment to fostering a culture of perpetual learning and improvement is essential. Our commitment is reflected in regular reviews of our operations and decisive actions addressing any identified weaknesses.

In line with this culture, we have identified a number of areas that will be the focal point of our efforts in the upcoming year. We are developing comprehensive plans and risk assessments, particularly in the realm of contractor and supplier selection and management. This strategic focus is not solely driven by gap analysis but is intricately tied to our critical review of performance, prompting corrective actions to strengthen our barrier performance.

- Documentation, records and knowledge management
- Contractor and supplier selection and management
- Operating manuals and procedures
- Management of operational interfaces
- Operational readiness and process start-up



From ambition to action

The outcomes from our own self-assessment process and the findings of the HSE PSL inspection together prompted us to implement a programme of positive change aimed at improving Process Safety across the organisation.

AOC is also committed to learning and sharing best practices. We actively contribute to the Step Change in Safety sharing and learning work group and in the past year I have also led a delegation that delivered feedback on our PSL Inspection at an OEUK forum. In addition to this, we have extended our openness to sharing feedback and insights on PSL with several other operators.

Last year, we participated in two PSL training sessions at DNV's Spadeadam test facility in Cumbria, with others planned for 2024. These sessions, attended by 50 AOC personnel, including our leadership team, received support from Empirisys and Step Change in Safety. The collaborative environment fostered a thorough review of lessons learned from both AOC and industry incidents. This approach facilitated

discussions on opportunities for improvement and prompted reflection on potential outcomes of major accident hazards experienced elsewhere.

The learning and sharing of incidents is a key part of our safety culture at AOC, in addition to our formal 'lessons learnt' process. Each week we have a townhall meeting with our onshore and offshore organisations, during which we review any incidents that have occurred, sharing and learning and discussing lessons learned.

In the ever-evolving landscape of emissions reduction, AOC applies a similar methodology to drive positive changes. My personal commitment to PSL, as well as that of my leadership team and the wider AOC community, will see us build on the excellent progress already made over the coming years.

We are operating in a very dynamic environment and look to apply an analytical, improvement planning and monitoring approach to all the challenges we face, and these activities are fully supported by strong behaviours aligned to the AOC values: Be Empowered, Be Authentic, Be Progressive, Be Exceptional.

Wood: balancing the demands of the future with the customers of today

OEUK interviews Martin Simmonite about life at Wood and his plans for the transition

artin Simmonite joined Wood as Senior Vice President for UK Operations in October last year, relocating from Surrey

The new role strengthens Wood's operations business in the UK, creating a more streamlined approach for customers and providing performance excellence across a growing and diversifying portfolio.

Four months later Mr Simmonite talked to OEUK about his priorities and plans as he looks ahead to an ambitious 2024 for Wood.

"Making the move to Aberdeen was a daunting thought," he explains. "It takes time to adapt to a new job and a new company but throw in a new city and a family move on top, it was a big decision. But it is one of the best career moves I have ever made."

Having left school at 16, Mr Simmonite learned his trade as a traditional engineering apprentice. He spent 12 years working as a piping engineer before studying project management and making the move into leadership roles.

He joined Wood from KBR where he was most recently Senior Vice President for Sustainability and Energy Transition, leading the strategic shift to drive business transformation and readiness for emerging markets.

He previously held the position of Senior Vice President of Technology Led Industrial Solutions, also at KBR, where he developed and implemented the strategy to deliver a combination of general maintenance services, LNG asset solutions, technical service consulting and digital solutions, globally.

He explained that the culture at Wood, and the people he now calls his colleagues, were one of the biggest draws for him. Having got into the business and spent time with its remarkable people, he is convinced that he has discovered the 'secret ingredient' to the business' success.

The consulting and engineering company is best

known in the UK for its heritage in oil and gas, but like many of its peers it is leveraging its experience to support the energy transition. Today, Wood is working across the UK delivering projects in waste to energy, hydrogen storage and carbon capture.

The company issued a positive trading statement in January, where its strategic focus on growth in energy transition markets is proving successful, with 40% of the company's global sales pipeline now from sustainable solutions.

Mr Simmonite was clear, however, that ensuring energy security here in the UK remains a priority and Wood is supporting its long-term clients to extend asset life through the design, delivery and commissioning of tieback developments for example.

He said: "Energy security is key to a socially acceptable transition: oil and gas are not going to disappear. A balanced transition will require greater investment in new energy markets. Some of these will depend on natural gas, as a feedstock at least for blue hydrogen projects and carbon capture and storage."

Shortly before Martin joined the business, Wood entered into a new strategic partnership for UK North Sea operations with Harbour Energy, agreeing a new

Introducing MaintAl

Wood's MaintAl solution combines artificial intelligence, technical expertise and decades of asset knowledge to optimise maintenance backlogs. It can cut operating costs by up to a fifth and has saved one UK operator 67,000 hours of maintenance backlog and a £270mn inventory saving across its assets.

Another UK client is extending its MaintAl contract with Wood to include additional offshore platforms following successful deployment at their onshore hub, where the digital tool has saved over 15,000 hours of maintenance work.

wood.



"Energy security is key to a socially acceptable transition: oil and gas are not going to disappear.
A balanced transition will require greater

investment in new energy markets. Some of these will depend on natural gas, as a feedstock at least for blue hydrogen projects and carbon capture and storage."



Photo: istockphoto.com/da-kuk

master services agreement (MSA) and associated contracts valued at around \$330mn. The services contract is "testament to where Wood is as a business. Harbour took the opportunity to pull together our upstream – engineering, procurement and construction capability with our operations and maintenance services into one package. The long-term contract enables us to drive asset performance as an integrated team, leveraging the best of Wood in the process," Mr Simmonite said (OEUK Magazine #57, p26).

Like others, Wood has made great strides in digitalisation, looking at ways to operate more efficiently.

"We are supporting clients to digitalise areas of operations, and our tool maintAI can enable operators to utilise existing data to optimise their maintenance backlog, performing the right work, at the right time ultimately unlocking capacity to deliver more efficient and effective operations."

"Maintenance efficiency is underpinned by the experience of those applying their knowledge, that is what determines the value of the system. Tools like maintAl are a significant differentiator for Wood."

Looking ahead, Mr Simmonite is clear in his role as SVP: "I am in post to strengthen our business, provide a streamlined approach for our customers, and continue to deliver performance excellence across our portfolio. I am confident with the team around me we will achieve great things, continuing to diversify the business, drive our sustainable growth, and further enhance our key client partnerships."

Wood's order book grows

Wood's order book of around \$6.1bn for 2023 was up 4% on a comparable basis on the year before and over 40% of its bidding pipeline now comes from sustainable solutions. The company has also started the sales process for its stake in the EthosEnergy gas turbine services joint venture.

CEO Ken Gilmartin said: "We are now one year into our strategic growth journey and our results continue to show clear progress. We have delivered strong revenue and EBITDA growth, improved our underlying cash generation, grown our order book, and continue to see an acceleration in the proportion of sustainable solutions within our pipeline."



Its awards in Q4 include a brownfield engineering contract in Europe, helping to produce active pharmaceutical ingredients for medicines; work on one of the world's largest offshore clean power projects in Germany; and being appointed 'owners' engineer' for a major green hydrogen project in Spain.

Consulting saw strong revenue growth of 13% to \$0.7bn with continued growth in our solutions across energy security, energy transition and digital consulting.

Adjusted EBITDA was up 4% at \$80mn, with revenue growth partly offset by a lower margin of 11% compared with 11.7% in 2022, reflecting opex investments to support future growth.

Revenue from projects rose 10% to \$2.5bn, with very strong growth across oil, gas and chemicals.

Adjusted EBITDA was 8% higher at \$185mn with a margin around 7.5% (FY22: 7.6%), partly reflecting the impact of pass-through revenue.

Operations saw like-for-like revenue growth of around 7% to \$2.5bn. This growth reflects higher activity levels across the business, particularly in Europe and the Middle East.

Adjusted EBITDA was around 11% higher at c.\$165 million, with an improved margin of around 6.5% (FY22: 6.1%) helped by good operational performance.

Investment Services revenue was up around 35% to c.\$o.3bn, reflecting higher activity in heavy civils business, and the facilities business that was transferred from Projects at the start of the year.

Adjusted EBITDA was c.\$70mn (FY22: \$69mn), including a contribution of around \$65mn from the two Turbines joint ventures (FY22: \$48mn).

Wood reveals growth in 2023 trade

	_		_		
	Revenue + % (\$bn)		Ebitda (\$mn)	%	
Consulting	0.7	13	80	4	
Projects	2.5	10	185	8	
Operations	2.5	7	165	11	
Investment					
services	0.165	0.3	70	1.4	
	Source: Wood				

Integrity HSE: Seeing the full picture

As it approaches its first anniversary, the company's co-founder Steven Harris talks to OEUK about its holistic approach to work-place health

ntegrity HSE, a health and safety consultancy based in Aberdeen, is poised for strategic growth in 2024, unveiling a distinctive approach to the unique needs of the energy industry. It was established in March 2023 by managing director (MD) Steven Harris, whose CV includes senior roles in health, safety and the environment (HSE) at major energy companies.

Integrity HSE has achieved several accolades, distinguishing it as a premier training provider. Notably, the company is the only training provider in Scotland licensed by both the Institution of Occupational Safety & Health (IOSH) and the International Institute of Risk & Safety Management (IIRSM). Building on this success, the organisation plans to add NEBOSH to its training offerings in 2024.

It is now expanding its focus to address mental health and well-being in the workplace, offering clients a holistic approach to welfare. Mr Harris emphasises its dedication to aligning its purpose with client needs in an affordable way - an approach that is paying dividends in terms of orders.

"We want to make the working world safer, healthier, and

more sustainable, but we're doing so in a way that offers an extremely attractive rate of return for our clients," he said.

The leadership team at Integrity HSE, including Darrell Lines, Director of Safety & Risk, and Shabnum Hanif, Director of Clinical Psychology, make a strong line-up. Mr Lines, who joined in May 2023, has already established the company's reputation in safety and risk markets for clients ranging from super majors to modest supply chain entrants.

Shabnum Hanif, a clinical psychologist, leads Integrity HSE's charge against mental ill health. With extensive experience in private hospitals, specialising in trauma, addiction, self-harm, and end-of-life care, she calls for a positive approach to mental health. Remote Employee Assistance Programmes (EAPs) and well-meaning first aiders are no substitute for direct and informed care.

Ms Hanif argues for a nuanced and data-driven approach, saying too many firms take a broad-brush approach to performance. "This requires a humancentric approach, " she says, stressing the importance of tailoring decisions about workplace well-being through data and risk assessment.









Darrell Lines, Director, Health & Safety Risk



Shabnum Hanif, Director, Clinical Psychology

Money spent on health yields returns

According to Health & Safety Executive (HSE) figures, mental health is responsible for at least 914,000 of the UK's 1.8mn ill-health cases and causes at least 17mn lost workdays. Deloitte estimates the cost to UK employers at up to £56bn in 2020/21. It finds 61% of UK employees have considered leaving work within the next year citing mental health issues.

Deloitte's report underscores the potential return on investment, with employers seeing an average return of £5.30 for every £1 invested in staff wellbeing.

Ms Hanif conducts regular consultations with industry leaders, ensuring that clients take a more medically valid approach.

To address this challenge, Integrity HSE spends a day each month in workplaces, including offshore locations, conducting assessments, integrating within the work environment, and advising clients how to achieve the best results, both for the workforce and for the company.

Mr Lines complements Hanif's efforts by integrating mental health training into the company's robust training programs. Courses range from essential knowledge for managers to advanced mental health first aid, addressing various aspects of occupational health and well-being. Mr Lines stresses the importance of a risk assessment aligned with HSE management standards, followed by guidance from a mental health professional to ensure legal compliance and effective risk mitigation.

"Every company should begin with a risk assessment that is balanced against the management standards provided by the HSE," Mr Lines asserts. He outlines the company's approach, which involves integrating mental health professionals into the client's team to ensure the effectiveness of controls and the dissemination of knowledge and education.

"Traditionally, workers would spend evenings in recreation rooms, fostering camaraderie. However, in a relatively short span of 15 years, the shift has occurred towards spending evenings in cabins."

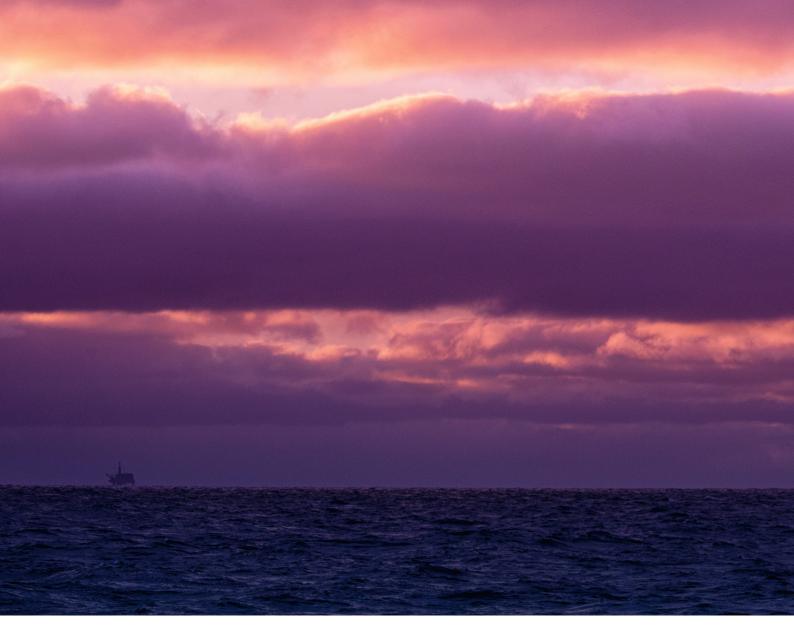


Photo: istockphoto.com/piola666

Rate of change is accelerating

Mr Harris reflects on the rapid pace of change in the modern world, acknowledging its dual impact on creating a healthy and productive work environment. He engages in conversations with senior leaders who believe that mental health challenges have always existed but have only recently gained attention.

While acknowledging the potential validity of this perspective, Mr Harris challenges its practicality by illustrating a hypothetical scenario involving a time traveller. "If I could take someone from the time of William Wallace (1300 AD) and drop him 660 years into the future, into the 1960s, I am confident he would adapt in a relatively short amount of time," he states. However, he contrasts this with the challenges faced by someone from the 1960s transported only 64 years into the future, highlighting the accelerating rate of

Traditionally, workers would spend evenings in recreation rooms, fostering camaraderie. However, in a relatively short span of 15 years, the shift has occurred towards spending evenings in cabins, connecting with family and friends through messaging and social media. Mr Harris underscores the importance of understanding the potential costs of losing physical connections with colleagues.

Ms Hanif extends this observation to onshore environments, cautioning against well-meaning managers who confuse physical proximity with meaningful connections.

She emphasises the significance of workplace setup and understanding individual needs to enhance workforce health and productivity. "The data has told us that the world has changed, and a traditional approach is often detrimental to every meaningful business metric. We must look at this more intelligently," she

Mr Harris also points out that not all business owners are fully aware of their legal duties under the Health & Safety at Work Act 1974. This legislation requires employers to provide and maint ain a safe working environment, a challenging task without competent advice. He underscores the importance of consulting competent advisors and warns against companies who claim expertise but do not provide proof of it.

"If you are going to address this and maximise performance by ensuring your workforce is healthy, then you must ensure that you are consulting



competent advice. If you don't have that in-house, then it would be wise to employ a specialist company like Integrity HSE," Mr Harris advises. There are many companies offering advice and claiming expertise and it is always wise to perform background checks on these.

Beyond their commitment to clients' physical workplaces, Integrity HSE has taken a significant step by opening its own psychotherapy clinic on Queens Road in central Aberdeen. This move underscores the company's dedication to providing accessible, discreet, and high-quality mental health care to their clients. The clinic comprises a team of highly qualified counselors specializing in various therapeutic approaches within a supportive environment.

Ms Hanif expresses her enthusiasm for the clinic, stating, "Our aim is to create a place that nurtures healing, resilience, and growth." The clinic offers a range of services, including individual counseling, group therapy, workshops, mental health training, and specialsed programs. Harris highlights the clinic's commitment to accessibility, with discreet parking spaces and an entrance hidden from the road, acknowledging the challenges individuals face in taking the first steps to seek help.

Already witnessing strong demand for its services, the clinic caters to a variety of mental health needs, offering tailored programmes to meet the unique requirements of each client. Harris emphasises the clinic's dedication to empowering individuals on their journey to mental well-being.

Integrity HSE's course offerings, detailed on their website, cover a wide spectrum of topics, including mental health, safety, risk management, and leadership. The company's flexibility extends to designing and delivering courses tailored to clients' specific needs, with accreditation options from external associations such as IOSH and IIRSM.

As Integrity HSE expands its services and establishes its psychotherapy clinic, the company stands at the forefront of addressing mental health challenges in the energy industry. Their comprehensive approach, rooted in data-driven strategies, competent advice, and a commitment to holistic well-being, positions them as leaders in creating healthier, safer, and more productive workplaces.

For more information about Integrity HSE's services and the new clinic, interested parties can contact enquiries@integrityhse.co.uk or visit the company's website at www.integrityhse.com.

The subtle art of data surveys

Empirisys' collaborations reveal the data that drives change, writes Peter Sueref, its co-founder and CTO

"There are three kinds of lies: lies, damned lies, and statistics."

Often attributed to the US humorist Mark Twain, this well-worn saying is regularly trotted out to cast doubt on the validity of statistics. It is undoubtedly accurate on many occasions. But then again, the esteemed author never read the data uncovered and analysed by our team of Empirisys engineers, process safety experts and data scientists!

We combine data science capabilities with a wealth of process safety, asset, operations and engineering experience, to uncover vital intelligence from previously untapped sources of data. We then analyse these to reveal unique insights, which translate into actionable solutions for improving safety across organisations.

Building a robust safety culture rests on the foundations of empirical, reliable data. That's why we dedicate so much resource to framing the right questions in the right way - there is a real craft to designing surveys which elicit responses we can rely on. For example, devising the correct proportion of empirical and emotional questions is important for balancing out the purely factual information, with the more personal sentiments which help us to gauge how the respondents actually feel. Semantics are equally important - the same question phrased slightly differently can uncover subtle nuances in responses, which collectively signpost valuable information.

We recently put our knowledge, experience and expertise into practice by working with two respected trade organisations in the energy sector to design, develop and deliver surveys integral to informing future plans.

Step Change in Safety: Process Safety Leadership survey

Last year we teamed up with Step Change in Safety to deliver a survey aimed at assessing the maturity of Process Safety Leadership across the offshore energy industry. We used our in-house designed and built intelligent survey app - Sense - as the platform on which to base the survey. Built around the 8 core principles of process safety, these translated into 8 themes, each with a set of questions to explore the principle in depth.

The survey was completed by nearly 450 people, most

of whom were senior industry leaders, representing more than 70 companies, from duty holders to contractors. So from the outset, this demonstrates exceptionally high engagement in process safety, even before we studied the data. What's more the scores were generally very positive, highlighting a number of areas of strength, including, culture, clarity and competency. Engagement, auditing and informing also scored well, although proactivity and sharing gained a significantly lower scoring.

So what happened after we had gathered that wealth of information? We went on to analyse the data and produce our report, before the findings were shared across the industry. Every participating organisation received their results broken down across each theme for them to explore and compare against the industry

Step Change in Safety and Empirisys jointly published and shared the survey findings through white papers, social media posts and conference presentations, so the whole industry could benefit from the insights, and use them to drive positive change in proactively improving safety.

Decom Mission: Global Decommissioning Network survey

A membership query resulted in an invitation to collaborate with leading trade organisation - Decom Mission. Active across the oil and gas, nuclear and renewable energy sectors, Decom Mission signpost decommissioning opportunities to members via the provision of data, market intelligence, member advocacy, and world-renowned decommissioning

Spotting the synergies between our two organisations, it was a natural progression for us to work together, and so our team designed, developed and delivered the Decom Mission Annual Report Survey of the global decommissioning supply network.

Along with my colleague, Dr Nyala Noe, I went along to the SPE Offshore Europe conference in Aberdeen to launch the survey, which is aimed at providing primary insight into current capability and capacity, as well as providing a snapshot of sentiment across the sector.

The survey has now closed, with the report due for



publication in May 2024. We are currently applying machine learning, diagnostics and AI driven tools to analyse the data, and provide practical insights.

CEO of Decom Mission, Sam Long commented on the launch, saying: "This survey forms a significant element of Decom Mission's own development curve as we aim is to better inform both the supplier and operator/ asset communities across all energy sectors, enabling improved decommissioning forecasting, targeting of capital and resources and the development of strategy.

"Currently, there is constant emphasis on future opportunities within the energy industry; Decom Mission is adamant that those of the present should not

"We combine data science capabilities with a wealth of process safety, asset, operations and engineering experience, to uncover vital intelligence from previously untapped sources of data."

be forgotten about. Decommissioning plays a crucial role in the energy transition and this survey focuses on the opportunities of today and tomorrow - that's vital to the survival of this industry."

Partnering with Decom Mission has been a fantastic opportunity for us to deploy our skillset in a situation where the results will inform real change in the decom supply network, enabling businesses to capitalise on opportunities as the drive to net zero accelerates.

Working across multiple high-hazard industries, we're acutely aware of the vital role that data has to play in protecting people and preserving culture. But asking the right question is only one piece of the puzzle; we need techniques to gain more insight from answers, over time, and across diverse demographics.

We care deeply about how data is interpreted and the narratives they create. Narratives lead to actions and interventions, which pave the way for positive change – and that's no word of a lie.

Peter Sueref has worked with data his whole career since graduating in Computer Science at Cardiff University. He was the Data Science Director at Centrica where he worked on some of the biggest problems in energy today.

Empirisys

Empirisys was founded by Peter Sueref and Gus Carroll with the aim of uncovering vital intelligence within your organisation. This can be refined into unique insights yielding practical solutions.

Our engineers, process safety experts and data scientists have decades of deep sector experience to uncover the hidden value of existing data.

Our clients recognise the value that we discover from insights, intuition and expert-led data crunching. They trust us to help them get the important decisions right. They seek us out for our blend of analysis, process design, data science and engineering expertise. They stay with us because we continually make a difference to their businesses.

We give our clients the bespoke, data-driven processes they need to transform their organisations from within. **www.empirisys.io**

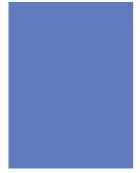
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