



Issue 52  
Winter 2021

wireline

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# An era ends: taking down Brae Bravo

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OGUK looks at the policy winners  
and losers

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hydrogen-CCS markets

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# Welcome to Wireline #52

**K**eeping the lights on and the population warm have been key priorities of Britain's governments for decades. Nobody wants a repeat of the power cuts of 1970s. There is no reason to suppose that this will change, but perhaps for the first time their ability to run the country at an affordable price is coming into question.

There was no shortage of passion coming out of politicians' COP26 speeches but it did not always seem to be grounded in reality (p28). Phrases such as a "just transition" will come back to bite policy-makers if the poorest are hit hardest by high energy prices. This year's low wind generation levels offshore have coincided with record and sustained high wholesale gas prices at European and Asian trading hubs. So when it decided not to encourage new storage facilities to replace the Rough field, Westminster took an optimistic view on LNG deliveries to the UK that -- this year at least -- is far from the meagre reality.

In this context it is good to see that small and large companies are continuing to invest in energy resources at home. IOG and Deltic Energy are both developing fields in the once-prolific Southern North Sea. Deltic even pulled off the feat of finding large farm-in partners to take on the operations. And further north offshore Scotland, Serica has already started delivering gas and condensates from its Columbus field to market – in time for the high price point. This focus on gas production will help to lower the carbon footprint of the UK continental shelf as a whole (p12).

The government has however taken some bold decisions regarding the financing of hydrogen projects (p34). Both blue and green will be needed, meaning pipeline gas or offshore production will need to be converted on a very large scale, in a way that protects both buyer and seller. From small clusters, complicated markets and pipeline interconnections may grow.

The demands of decarbonisation are also being met through ingenious new approaches upstream. The Net Zero Technology Centre is working with aviation company Flylogix to monitor emissions from installations offshore in a reliable and accurate way – a challenge from all sorts of angles (p16).

And as a reminder of the cycle of life, the Brae Bravo platform decommissioning marks the end of a once sizeable player in the long history of UK oil and gas production (p40). Some of the engineers at the birth of the project are now taking it apart and with as much care as it was constructed.

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OGUK

Wireline is published by  
OGUK, the voice of the  
UK oil and gas industry.

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ISSN 2053-5392 (Print),  
ISSN 2053-5406 (Online)

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trading as OGUK.

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OGUK's Decommissioning Manager, Joe Leask, opens the Offshore Decommissioning Conference 2021, the first 'hybrid' event from OGUK



## Operators to spend £16.6bn on UK decom

UK oil and gas asset operators will spend £16.6 billion removing an estimated 1.2 million tonnes of disused oil and gas installations offshore over the coming decade, says the latest edition of a flagship report published by OGUK.

*Decommissioning Insight 2021* says the work will set new standards in waste recovery and support thousands of jobs both directly and in the supply chain. About 95% of the material from such installations is typically already recycled but the focus is now moving towards reuse – where component parts, or occasionally whole structures, are redeployed for new purposes with minimal modifications.

Another key aim is to establish the UK as a

centre of excellence for decommissioning – an industry that is set for global growth as oil and gas installations around the world reach the ends of their useful lives. British companies and workers who have built experience in the North Sea will be in high demand.

Examples include the Brae Bravo Platform. This 36,000-tonne platform, lying 170 miles northeast of Aberdeen, produced 500 million barrels of oil equivalent over its 33-year lifetime. The structure, weighing over 36,000 tonnes, was sent to Norway, where 95% of its material was destined for recycling or reuse. (Images at links below).

OGUK's Decommissioning Manager Joe Leask said the booming business was a "huge opportunity for UK companies to show their engineering skills, powers of innovation and ability to compete on a global scale. This is going to be an exciting 10 years – there's a huge amount of work to be done and with £16.6 billion to be spent, there will be many opportunities for UK companies and workers."

## Message from our CEO



Deirdre Michie  
OBE,  
CEO, OGUK

Welcome to the first issue of *Wireline* of this year. It has been a busy time, as the number of OGUK reports, events and meetings testify. In the last few months of 2021 we hosted a Breakfast Briefing in Aberdeen about investing in the energy transition; and a virtual/physical event in St Andrews to launch the annual *Decommissioning Insight*. We also published an *Energy Transition Outlook*, the *Health & Safety Report* and the *Environment Report*.

These show, among other things, how our changing industry is protecting its workers and the natural environment as it goes about its essential business. The development of offshore electrification, the growth of recycling and ever-important attention to personal safety all contribute in very different ways to the reputation of our industry.

Our industry remains in the spotlight for all the good reasons – it creates energy security, jobs and tax revenues; and it is also a hedge against environmental damage from imports. The notion of a just transition that does away with oil and gas production without addressing the demand side is simply not compatible with our collective goals. The persistent phenomenal gas prices have exposed the weakness in a reliance on imports bought on the spot market. And the queues for petrol demonstrate how vital it is in our every-day lives.

We must do what we can to explain the advantages of a home-grown oil and gas industry – advantages that its move towards decarbonisation can only amplify – to the public.

There are also of course less visible threats: I am referring to the new COVID-19 variant. I am confident that the experiences of the recent past will mitigate the threat and help us combat this persistent virus.

In the meantime, there is lots to look forward to what 2022 will bring as we prepare to grasp the many exciting opportunities that the energy transition presents.

Deirdre



Top: Sian Lloyd-Rees, UK Managing Director of Aker Offshore Wind (left) with Deirdre Michie, CEO, OGUK (right)

Bottom Right: Illustration showing where the UK's gas comes from, OGUK's Energy Transition Outlooks and Investing in the transition publications. Both publications available for free download from [oguk.org.uk](http://oguk.org.uk)

## UK will need all five Carbon Capture 'cluster' projects

OGUK has underlined that the UK will need all of the proposed cluster projects planned for the mid 2020s and more, if it is to achieve net zero carbon emissions by 2050.

The newly appointed Energy Minister Greg Hands announced that the government has picked two for the first track: the Hynet cluster, based in the north west of England, and the East Coast cluster, made up of Zercarbon Humber and Net Zero Teesside. The Scottish cluster Acorn was announced as a reserve project for Track 1.

There are several other carbon capture cluster projects currently in development and scheduled to be put forward for Track 2 of the Government's plan, including V Net Zero (also based in Humberside), the Delphynus cluster in South Humber and one based in the Southampton area.

In total, they could help the UK capture up to 100 million tonnes/yr of carbon to decarbonise sectors such as heavy freight and marine transport, as well as steel, chemical and cement manufacturing. The Climate Change Committee has said technologies such as carbon capture and storage and hydrogen are critical in helping the UK get to net zero.

OGUK Sustainability Director Mike Tholen said: "This is a landmark moment for the UK.... However, we are going to need all of these carbon capture and hydrogen projects and more if the country is to become carbon neutral by 2050." He added that all the carbon capture clusters in development involve an oil and gas company. "We look forward to seeing both Track 1 and Track 2 clusters make progress urgently, turbo charging progress towards our climate goals while providing jobs and opportunities to energy communities across the UK."



## UK Government welcomes OGUK's new Supply Chain Champion

Energy Minister Greg Hands MP has welcomed Sian Lloyd-Rees as OGUK's Supply Chain Champion, a new role created as part of the North Sea Transition Deal. The announcement was made during his first visit to Aberdeen since his appointment.

Lloyd-Rees is UK Managing Director of Aker Offshore Wind and a board member of OGUK, the leading representative body for the UK's offshore oil and gas industry.

In her role as Supply Chain Champion, she will support OGUK in representing energy businesses that generate £27bn/year and employ 92,000 people across the UK.

OGUK CEO Deirdre Michie said: "We need to ensure a managed transition that takes people with us and supports the UK's use of oil and gas while accelerating low carbon technologies like wind, hydrogen and carbon capture, which are so crucial to the UK achieving net zero emissions by 2050."

Lloyd-Rees said: "Over 1,000 UK companies support the UK's energy industry and many export globally, generating £60 billion for our economy in the five years preceding the pandemic. Their technology, innovation, skills and capabilities will be key to achieving the changes needed in our energy systems. I'm honoured to champion their cause."





## European deal to drive cleaner energy

A group of upstream trade bodies representing five European countries pioneering lower carbon oil and gas in the North Sea signed November 9 a formal agreement to work together to advance the transition to net zero emissions.

Many oil and gas companies are already investing in renewable energies, as well as driving forward hydrogen and carbon capture and storage. In a memorandum of understanding signed by the UK, Denmark, Norway, the Netherlands and Germany in November, the representative bodies committed to play their part in tackling climate change. It includes a commitment to host an annual summit to share progress to cut industry emissions and develop technologies which could be critical in helping other sectors reduce emissions. Commenting on the landmark agreement, OGUK CEO Deirdre Michie said: "The UK oil and gas industry is changing and the North Sea Transition Deal sets out in detail how our industry is working to support the delivery of the UK Government's climate targets and use our skills to help other industries do the

same. Today's agreement recognises that climate change doesn't stop at the border and commits us to work together to give millions of people access to cleaner energy and deliver a managed transition towards net zero."

## UK needs its oil and gas for the transition

OGUK says the projects planned by its members are essential to maintain production and protect UK consumers during the planned transition to lower carbon forms of energy. The warning follows the debate over the Cambo oil and gas field, planned 75 miles west of Shetland. It would deliver 170 million barrels of oil, plus some gas, over 20 years. But Scotland's First Minister Nicola Sturgeon joined environmental groups in suggesting such projects should not go ahead, citing concerns over climate change. The final decision rests with the UK government which has long recognised the need for secure energy supplies.

OGUK's research shows, however, that the UK is already becoming highly reliant on other countries and has to import half its gas. The UK government's latest trade figures

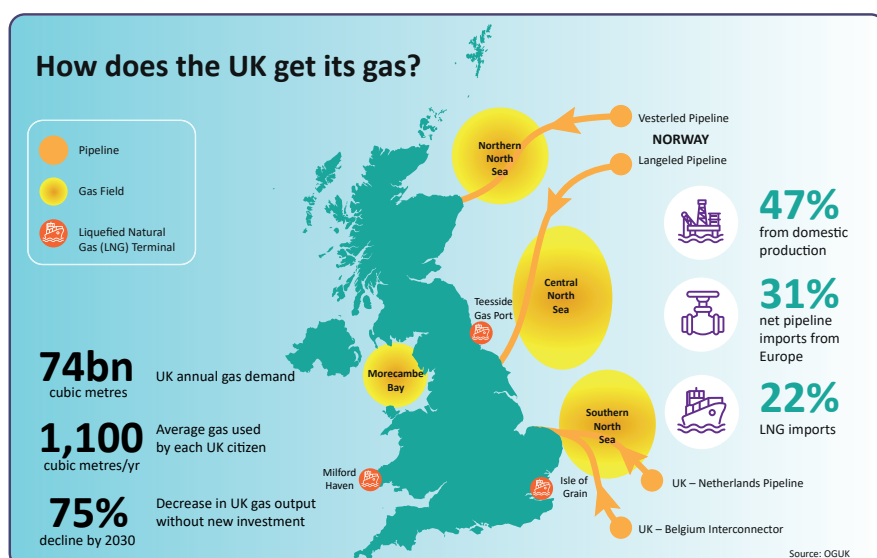
show that, in the year to June, the UK paid Norway £5.2 billion for gas plus £6.1 billion for crude oil; and lesser amounts to Russia, Qatar and the US.

OGUK is warning that if new projects like Cambo are not approved then UK production would plummet with gas output, for example, falling up to 75% by 2030. This would leave the UK increasingly reliant on imported energy.

About 24 million homes are heated only by gas which also provides 41% of our electricity. The UK has 32 million private cars and other vehicles that need diesel or petrol, while the conversion to electricity will take time and squeeze the power supply margin yet tighter. These projects will be among the world's cleanest oil and gas projects. The industry is driving down emissions from the production of oil and gas in UK waters, as set out in the North Sea Transition Deal, aiming to reach net zero by 2050.

The emissions generated by consuming the oil and gas extracted from such projects have also been included in the Climate Change Committee's carbon budgets. These government-approved plans include continuing but declining use of oil and gas for at least the next three decades.

OGUK CEO Deirdre Michie said: "If we cut our own supplies of gas and oil faster than we can reduce demand then we will have to import more of what we need. Our import bills will go up without any reduction in emissions."





## Emissions fall 10% in a year

Emissions from the UK's offshore oil and gas industry fell by the equivalent of 1.8 million tonnes of CO<sub>2</sub> in 2020, a 10% reduction on the year before. Efficiency improvements and reduced flaring and venting accounted for nearly half, while the rest were due to the pandemic.

In its 2021 Energy Transition Outlook, OGUK estimates that emissions from the production, transport and processing of oil and gas in the UK fell to the equivalent of 17.1m tonnes of CO<sub>2</sub> in 2020. This compares with the 2018 figure of 18.9m tonnes (5 percent of the UK's national emissions).

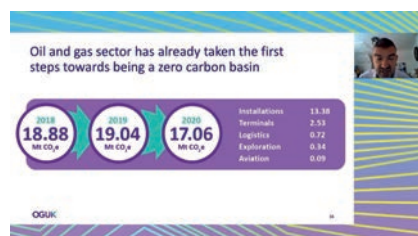
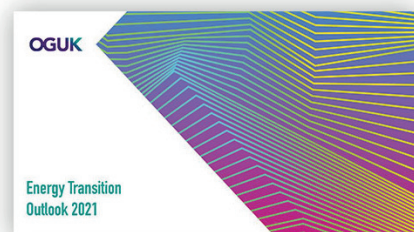
The OGUK report coincided with the UK Government's Net Zero Carbon Strategy,



setting out how the country might cut emissions while growing the economy.

The reductions are in line with the sector's ambitious commitments under the North Sea Transition Deal, in which the industry committed to reduce emissions 10% by 2025, 25% by 2027, and 50% by 2030.

OGUK sustainability director Mike Tholen, describing the reduction as "just the beginning of our journey," said he expected faster reductions post-2023 as industry initiatives had an increasing impact, supported by broader climate initiatives. "We need a managed and orderly transition to a lower-carbon energy system, and during this period society will continue to use oil and gas," he said.



## Government launches upstream checkpoint

The UK Department for Business, Energy and Industrial Strategy (BEIS) published two major documents in the dying days of 2021: the Carbon Compatibility Checkpoint consultation for new upstream licences; and a business plan for companies to engage in CO<sub>2</sub> transport and storage.

In September 2020, BEIS asked officials to consider if the continued award of licences for oil and gas exploration was consistent with the nation's carbon budget, its nationally determined contribution (NDC) and its hope to reach net zero emissions by 2050. The scope extended to the economy, including jobs, tax revenues and economic contribution and energy security.

The government decided to introduce a "checkpoint" before a licensing round is offered, and is now consulting on the design of that checkpoint. Views are to be submitted by the end of February 2022.

The government also published its draft business plan for CO<sub>2</sub> transport and storage companies. It believes that the two activities should be done by the same company with



a single asset base. They should also be regulated and earn revenues from that one asset base.

But the accounts for the key elements of the value chain – onshore transport, offshore transport, storage and system operation – should be kept separate it says. It expects the projects that will be dotted around the country will link up and form a UK carbon network.

## Scotland's oil industry will 'lead the way' to net zero

OGUK welcomed the Scottish Government's backing for the nation's energy workers and companies in building a low-carbon future Scotland's oil and gas industry, and the 100,000 Scots who work for it, will play a key

role in achieving the government's target of reaching net zero by 2045, trade minister Ivan McKee told an energy industry conference in early September.

The nation's expertise in offshore engineering meant Scotland could also become "a world leader in emerging areas such as hydrogen technology, carbon capture and storage, and offshore wind," McKee told the delegates at the opening session SPE Offshore Europe Virtual Conference.

McKee also warned that such transformations must be carefully managed, not rushed. "Like many countries Scotland was scarred by the deindustrialisation in the 1970s and 1980s, but as someone who witnessed that first-hand in the West of Scotland, I vividly remember the damage done to communities there."

OGUK's Sustainability Director Mike Tholen said the speech was "welcome recognition that Scotland's energy communities and the tens of thousands of people working in this sector can and should be at the heart of those changes."



## OGUK welcomes UK hydrogen strategy

OGUK Director of Sustainability Mike Tholen welcomed the publication of the UK's long-awaited awaited Hydrogen Strategy in early August. Its aim is to enable hydrogen to be a vital resource as one of the multitude of low-carbon solutions we now require.

"This provides a clear long-term signal that government is committed to building a world-leading UK hydrogen economy and sets out how it will work with industry to achieve this," he said.

"Consistent with the Prime Minister's Ten Point Plan, our North Sea Transition Deal, and our Methane Action Plan alike, this strategy can help energy communities realise the full potential of this alternative fuel.

"The recognised need for the development of green and blue hydrogen is a sentiment we echo – all options should be made viable if we are to transform the UK's energy system to a sustainable one.

"We look forward to working with the UK Government to consult on this and help develop hydrogen, as well as the other necessary low-carbon solutions we know will be needed to reach net zero."





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## Deltic announces completion of 3D seismic survey

Cairn has completed the 3D seismic survey over licence P2428 and surrounding areas of the Southern North Sea (SNS), licensee Deltic Energy said November 23. The results are expected to be delivered in Q2 2022.

Under a farm-out agreement, which received regulatory approval from the Oil & Gas Authority earlier that month, Cairn is responsible for all the costs of the seismic acquisition, processing and associated work programmes up to the point at which a positive well investment decision is made. It also paid \$1mn to cover Deltic's historic costs.

Deltic now holds a 40% non-operated interest in the licence, which contains the key Plymouth prospect, a large Zechstein carbonate build-up, which is analogous to Deltic's Pensacola prospect and the Crosgan discovery.

Further upside on the block is associated with the Cupertino and Richmond prospects which will also be further evaluated using the newly acquired 3D seismic data.

Following a drilling decision being made on either of P2428 and P2567, Cairn will fund 70% of the costs of whichever well is drilled first, subject to a gross well cost cap of \$25mn.

Deltic CEO Graham Swindells said he was pleased that the new 3D seismic survey began so soon after clearance for the farm-out, "demonstrating a shared commitment to immediately accelerate the development of these licences and hence timeline to potential drilling." Deltic farmed out a stake in the Pensacola licence in 2019 to the Anglo-Dutch major, Shell.

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## First gas for IOG

UK independent IOG is hoping to deliver first gas from its first two Southern North Sea fields, Blythe and Elwood, early in the new year, a little later than hoped for. That will be in time for the "exceptionally

strong" gas price, CEO Andrew Hockey said in a November 22 operational update. "Forward pricing remains substantially above the company's planning case, although volatility also remains high," the statement said.

Preparatory discussions are underway with relevant parties to start implementing a prudent, systematic gas hedging strategy by the end of Q1 2022. The company's strategy also benefits from a "timely new low carbon intensity."

The offshore subsea and hook-up scopes for the Blythe and Elgood fields are complete and the company is working closely with Bacton terminal operator Perenco and an enlarged workforce to complete the reception facilities recommissioning.

Separately, the *Noble Hans Deul* rig has been repaired and, subject to recertification for safe operations, reached the Southwark field in early December. Planning and contracting is underway for the two appraisal wells at Kelham North/Kelham Central (P2442: Block 53/1b) and Goddard (P2342: Block 48/11c and 12b) respectively.

IOG said it had exercised its contract option to drill these wells in succession with the *Noble Hans Deul* after the second Southwark well and at the same "competitive" day rates as were agreed for Phase 1.

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## Serica starts up Columbus

UK producer Serica Energy has announced that the first production from its Columbus field in the Central North Sea (CNS) started to flow into the Arran subsea system 24 November.

The commingled Arran and Columbus production flows to the Shearwater platform where they are processed, and from there the separated gas and liquids flow to market. Plateau output is expected later in December.

In a November 25 statement, CEO Mitch Flegg said he was "delighted" that the company met the start-up target of Q4 2021. He said: "This marks a significant

milestone for Serica as it reaches the successful conclusion of its first development project."

Serica is sharing infrastructure to develop Columbus, saving emission. Its partners are Waldorf Production and Tailwind Energy.

A competent person's report has recently put the gross undeveloped 2P reserves in Columbus at over 14mn barrels of oil equivalent.

Separately, Serica awarded a platform services contract to Altrad, covering the access, insulation, painting, deck crew services, heat exchanger maintenance and environmental services for the Bruce platform, further to the north.

Altrad said it won the contract on the basis of its proven ability to enhance safety performance and operational efficiency in line with Serica Energy's strategic objectives and goals over the past three years. Altrad aims to expand by 75% by 2026.

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## Ithaca Energy signs up Global E&C for three-yr UKCS contract

Ithaca Energy has signed a three-year contract with Aberdeen-based Global Engineering & Construction (Global E&C) for its UKCS oil and gas production operations.

The contract is Global E&C's first such with Ithaca and it will see the company modify Ithaca's UK operated assets. The initial three-year term may be extended, Global E&C said October 26.

Global E&C added the deal will secure more than 50 onshore and offshore roles. This includes survey, fabrication, engineering, construction and commissioning expertise in-house.

Ithaca's operated assets include a number of oil and condensate fields that are already in production in the Greater Stella Area in the Central North Sea. There is also a number of prospects in the vicinity. Ithaca has over 60mn barrels of oil equivalent of net proven and probable reserves there.



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## Wood lands Turkish job

Wood, the global consulting and engineering company, has become the partner of state enterprise Turkish Petroleum (TP) for managing the development of the Sakarya gas field in the Black Sea,

Wood team will carry out the integrated project management and engineering verification for the first engineering, procurement, construction and installation phase of the subsea production system, gas transport pipeline and umbilical and the onshore processing facility. It did not put a value on the contract.

Sitting 150km off the coast, Sakarya is Turkey's largest gas field, with reserves confirmed at 405bn m<sup>3</sup>. Phase 1 will deliver 10mn m<sup>3</sup>/d to the Turkish grid, where it will mingle with and partly displace, pipeline gas from Russia, Azerbaijan, Iran and regasified LNG.

In the November 25 announcement of the award, Wood's president of energy, Andy Hemingway, said: "The Sakarya gas field will make a significant contribution to the development and growth of the Turkish energy industry and the wider economy." In the past year, Wood's subsea team supported TP throughout the project's pre-front-end engineering design (FEED) and FEED phases.

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## Petrofac wins Malaysian EPCC contract

Petrofac has won a \$96mn contract from the Malaysian state energy firm Petronas' upstream arm, the UK engineering firm said 8 November. The engineering, procurement, construction and commissioning scope of work will encompass the delivery of the new Bintulu additional gas sales facilities 2 plant at Tanjung Kidurong, in the Malaysian state of Sarawak.

The greenfield development includes a process and utilities unit; an effluent

treatment unit; a metering skid; a fire water tank; pumps; a flare system and the main substation building. In addition to the 390mn ft<sup>3</sup>/day new facility, the project will also involve brownfield modifications and tie-in within Petronas' plant in Bintulu, the home of the country's LNG export terminals.

Petrofac Group's local subsidiary, with engineering support from Petrofac-RNZ and local supply chain and subcontractors, will deliver the project, "underpinning our commitment" to local content.

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## Add Energy wins contract for US asset tracking system

International asset management consultancy, service and software provider Add Energy has secured its first US contract for its asset tracking software system.

A Houston-based chemical decontamination company picked the Norway-headquartered company's AssetVoice to track and manage critical equipment required for seamless and safe servicing of chemical plants and refineries.

Radio frequency identification technology and sensors enable AssetVoice to track and manage the asset's entire journey to optimise availability, integrity and efficiency. The vice-president of Add Energy in North America, Susan Steyn, said: "We are delighted to roll out our cutting-edge product in the US for the first time, and we look forward to helping unlock efficiencies across our client's accounting, operations, maintenance and warehousing departments."

Add Energy also won a contract to complete the master data and maintenance management regime for a major but unnamed FPSO operator. It said the deal builds on a "long-standing relationship" and is in line with the client's wish to streamline and standardise its approach to maintenance management across its fleet. Add's executive vice president Peter Adam said: "This collaboration represents the

latest chapter in an excellent and long-standing relationship with our valued client, which I am extremely proud of."

Add will design the computerised maintenance management system and deliver it remotely while the topsides process modules are fitted in Asia.

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## Maersk Training wins awards

Global safety specialist Maersk Training has won two Global Wind Organisation (GWO) Safety & Training awards at the WindEurope Electric City conference in Copenhagen.

Two training teams – Humber, UK and Brazil – were each recognised as Training Teams of the Year, in the 'newcomer' and 'Americas' category respectively.

The GWO Safety & Training Awards is the world's first programme of its kind, focused on excellence in training and aims to recognise the impact of training providers, instructors, and supporting workforces within the wind energy industry.

Maersk Training also received high commendation for Training Team of the Year in the 0-500 WINDA uploads category. In the UK, Maersk Training offers "industry-leading bespoke enhanced rescue package delivered exclusively at Maersk Training in Humber."

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## Well-Safe Solutions appoints new head of strategy

Aberdeen's well plug and abandonment specialists Well-Safe Solutions has appointed Chris Hay as its director of strategy and business development, it said November 17.

The appointment comes during a period of sustained expansion as decommissioning gathers momentum. This year, Well-Safe Solutions has added 77 employees and secured two major contract wins for the



# Member News

*Well-Safe Guardian.* It is set to decommission dozens of wells in the Buchan, Hannay, Banff and Kyle fields on the UKCS in 2022.

Hay has worked for over 16 years in the integrated well plug and abandonment (P&A) and offshore drilling sectors and was managing the commercial operations at the UK office of a leading global drilling contractor immediately before his move to Well-Safe. Before that, he held senior leadership roles across the North Sea, West Africa and Europe for Tier 1 international service companies.

Hay said Well-Safe Solutions continues to secure new contracts through its innovative P&A Club operating model and he looked forward to further developing a robust business development strategy with the team.”

## Noble takes over Maersk Drilling in stock deal

Danish contractor Maersk Drilling is to be bought by US Noble and headquartered in Houston if an agreed merger goes ahead next year, they announced 10 November. Both companies’ boards and all their major shareholders are in favour of a deal that will see a roughly equal division of ownership between the two sets of shareholders.

Maersk Drilling’s chairman Claus Hemmingsen said the merger would offer clients “increased scale, global reach, and industry-leading innovation. The combination will create value for all shareholders and will offer investors a unique opportunity to benefit from the market recovery, a robust financial position and strong free cash flow potential, all paving the way for the potential return of capital to shareholders.”

The combination is expected to generate annual potential cost synergies of \$125mn within a few years.

Noble’s CEO Robert Eifler will become president and CEO of the combined company while the other six seats will

be shared equally. The new company will be owned roughly equally by the current shareholders but there is also a limited cash-for-shares option too.

Maersk parted company with AP Moller in 2016. French operator TotalEnergies bought Maersk’s upstream business the following year.

## Neptune slims down Norwegian portfolio

Privately-owned Neptune Energy has netted some \$35mn from the sale of non-operated minority stakes in three producing fields and two pipelines offshore Norway, it said November 12.

OKEA will have 2.2% in Ivar Aasen and M Vest will have 0.8% in Ivar Aasen, 7.56% in the Draugen field, 4.4% in the Brage Unit, 1.2% in the Edvard Grieg oil pipeline and 1.8% in the Utsira High gas pipeline.

The transaction is part of Neptune’s strategy of focusing on core areas. In Norway these are the Gjøa, Gudrun, Njord, Dugong and Snøhvit fields. All decommissioning liabilities will be transferred to the buyers. The effective date for the agreements is 1 January 2022, subject to regulatory approval. Natixis acted as financial adviser to Neptune.

## Aker, Statkraft, Ocean Winds form Norwegian wind alliance

Norwegian engineering firm Aker Offshore Wind, the state power generator Statkraft and the Portuguese-French joint venture Ocean Winds are to bid collectively for contracts to build and operate offshore wind and associated infrastructure in the

Utsira Nord licence area in Norway.

They announced on 5 November the creation of an equal partnership that will submit an application to the Norwegian authorities for the development of a commercial scale floating offshore wind farm in the particularly windy area.

The consortium covers the full value chain from development to delivery of offshore green energy to market. Aker Offshore Wind and Ocean Winds have partnered on other projects in the US, South Korea and most recently in Scotland.

Aker Offshore Wind said: “Together with Ocean Winds and Statkraft, we have formed a partnership of experienced developers and operators to push the boundaries for offshore floating wind and develop new value chains for Norwegian industry.... At Utsira Nord, the ambition is to further develop and industrialise technology based on Principle Power’s market-leading floating substructure technology.”

## UK equipment supplier Survitec completes Blue Anchor deal

London-headquartered survival technology company Survitec has completed the acquisition of Blue Anchor Fire & Safety, a survival solutions provider to the offshore energy industries among others.

The completion, announced November 2, follows Survitec’s May purchase of Norway’s Hansen Protection.

Survitec said Blue Anchor was “an excellent fit for Survitec. This investment allows us to enhance our capabilities across the region.”

Blue Anchor, which offers survival support including servicing and liferaft rental and product supply, operates an MCA-approved liferaft service station in Boyndie, Scotland. It is one of only a handful of UKAS-accredited companies



certified to carry out gas cylinder testing in the country.

“The transaction supports our objective to improve our coverage in attractive markets,” said Survitec. Blue Anchor co-founder Scott Skinner will continue as operations manager.

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## Neptune wins award for methane reduction plan

Privately-owned producer Neptune Energy has won the top award from the Oil & Gas Methane Partnership (OGMP) for its credible plans to reach a net zero methane intensity by 2030, it said 9 November.

The United Nations’ inaugural International Methane Emissions Observatory (IMEO) report referenced Neptune’s plan as well as its 2025 methane emission intensity target of 0.0015%. It said it was the most ambitious of all the participating oil and gas companies.

The importance of tackling methane emissions was covered at COP26 in Glasgow, and the IMEO will play an integral role in the Global Methane Pledge – a US and EU-led effort to slash methane emissions by 30% by 2030 – by establishing a global public record of trusted and transparent methane emissions.

The IMEO report said: “Neptune Energy is an upstream company with an ambitious target to reach a near-zero methane intensity for their production of hydrocarbons based on their exports. They are committed to work with their global assets to have the highest reporting quality and deploy mitigation measures.”

The announcement follows the completion of a first-of-its-kind collaboration with Environmental Defense Fund to measure methane emissions on the Neptune-operated Cygnus platform in the UK North Sea, using advanced drone technology.

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## Xodus sets up climate change academy

A new transition skills initiative, the not-for-profit X-Academy, will focus minds on solving real-life climate-change energy issues, the founder Xodus said 1 November.

X-Academy will provide training opportunities for people to accelerate efforts towards net zero and has already attracted funding. “We are thrilled to have the support of ETZ, BP and EnBW and are in talks with other stakeholders to ensure X-Academy can help as many people as possible,” Xodus said.

The two-year mentored placements in Aberdeen will be open to graduates and people looking to reskill for positive change with 24 participants expected in the first cohort. X-Academy will reinvest training profits into further skills development, climate projects and innovations.

ETZ has invested a grant of £1.6mn to fund two years of running costs and ScotWind consortium partners BP and EnBW have committed more than £1mn in a five-year deal, linked to the success of their bid.

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## Corporate travel co links up with OGUK

Corporate Travel Management (CTM), a specialist global travel management company, has joined OGUK, the leading representative body for the UK offshore energy industry as a partner and member, the two announced November 12.

CTM will offer specialist energy, resource and marine (ERM) travel management services to OGUK members. Its range of services includes Lightning, the proprietary booking platform that was recently named Best Corporate Booking Platform at the

Business Travel Awards Europe.

CTM said: “Now more than ever, it’s vital that the right travel choices are facilitated and encouraged by travel management partners. CTM is proud to play our part in the move to more sustainable travel with our innovations in travel technology and investments in sustainable aviation fuel. We’re looking forward to engaging with the OGUK community and sharing our expertise.”

OGUK CEO Deirdre Michie OBE said: “It is great to have CTM as an OGUK member. Our companies are focused on harnessing their skills to innovate and scale up the greener solutions needed to help the UK achieve net zero by 2050, while generating enough energy to keep our society functioning.

“CTM’s approach of using insights and data into sustainable travel fits in well with that core industry goal. We look forward to working with them as our changing industry plays its key part in accelerating the country’s transition to a low carbon energy mix.”

### An invitation to submit your member news

*Members are invited to submit their news to our editorial team, via email to us at:*

**[editorial@oguk.org.uk](mailto:editorial@oguk.org.uk)**

*where selected stories are published in Wireline or to our member news section of the OGUK website*

**[oguk.org.uk/membernews](https://oguk.org.uk/membernews)**

*Member news is subject to editorial review, no guarantees of publication given. For more information please contact our Editorial team.*







A photograph of a grey asphalt runway or taxiway. In the foreground, the tail section of a white drone with orange diagonal stripes is visible. The word 'FLYLOGIX' is printed in blue on the white surface. A thin wire extends from the drone towards the bottom right. In the background, there is a green field, a fence, and rolling hills under a clear sky.

# Methane measurement project sets flightpath to net zero

A pioneering project run by the Net Zero Technology Centre and unmanned aviation developer Flylogix could see a step change in methane emissions measurement and control



**E**missions reduction is now a priority for every portion of the energy sector. Alongside carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) emissions reduction is a key target for the oil and gas industry, not least because of its potency as a greenhouse gas, which can be up to 80 times that of carbon dioxide over a 20-year period. Oil and gas is the third-largest methane emitter in Europe by sector, behind agriculture and landfills/waste, and accordingly, any efforts to drive emissions reduction must include credible solutions for methane mitigation.

Such solutions are recognised in much of the supporting policies and commitments which set the industry on the pathway to net zero by 2050. These efforts include the publication last year of an Emissions Reduction Pathway, the launch of a Methane Action Plan in June this year, and are a central element of the North Sea Transition Deal (NSTD). Accordingly, developing innovative solutions forms a key plank of the Net Zero Technology Centre's three-pronged technology roadmap for the future of the North Sea.

However, meaningful efforts to reduce methane emissions must start with reliable, accurate measurements of where and how it is emitted – a difficult proposition for assets sometimes hundreds of miles offshore. In response, the past several years have seen the Net Zero Technology Centre facilitate a pioneering new collaboration with developer Flylogix and several UKCS operators, using unmanned aircraft to fly over and survey methane emissions from offshore assets. This first-of-its-kind project could have a revolutionary impact on how these challenges can be addressed. *Wireline* spoke with the two organisations to learn more.

### **Moving beyond line of sight**

While unmanned aviation in oil and gas is nothing new – inspection of vessels and assets by drone is now routine – this project required more fundamental development, not least a legal framework. Operating these unmanned aerial vehicles (UAVs) beyond visual line of sight (BVLOS) is still a relatively nascent field and development of this technology has relied on significant dialogue with the UK's Civil Aviation Authority (CAA) as to how operations should be carried out. An initial project in 2019, supported by the Net Zero Technology Centre and TotalEnergies, as well as aviation regulators, helped qualify the operating model and establish safety cases, paving the way for further work on the

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## **"Methane measurement is the service, that's the challenge that needs solving; BVLOS is the critical technology enabler."**

development of the methane measurement service.

As Flylogix business development director Chris Adams explains: "Methane measurement is the service, that's the challenge that needs solving; BVLOS is the critical technology enabler."

Without development of BVLOS operations, conventional aviation is a tricky proposition for this area of work. The aviation sector has a sizeable emissions profile of its own to reckon with, and any 'conventional' solution that increases overall emissions is no solution at all. Adds Chris: "Lots of services require you to use manned aviation, which is hugely energy intensive, but a lot of things – like acquiring data and images – can be delivered with a smaller system that's lighter and more efficient and with a smaller energy demand. If you can do that, you can make a massive impact on the emissions profile of an industry that is really struggling."

To put this in context, Flylogix says a flight using its airframe represents 1% of the the emissions profile of a standard offshore helicopter such as an S-92.

Despite the persuasive carbon economics, building out the technology also requires operators who are willing to support and facilitate trial flights over their assets. With greater freedom to fly granted by the CAA, Chris credits the Net Zero Technology Centre's ability to bring together willing partners and to help push the technology through the often-difficult development phase and into a viable service. "If you don't solve this problem, you can't scale technologies up and industry





won't adopt them. You get caught in a Catch-22 where you have an end customer who wants it and a developer like us with the technology and skills to build the solution, but there's still a load of investment risk. That's where the Net Zero Technology Centre plays a really powerful role in bridging that gap."

For his part, the Net Zero Technology Centre project engineer Charlie Booth is equally pleased with the group that stepped forward. "We're all about technology development, but that technology is of no use if it's not adopted properly," he notes. "The consortium of operators that are involved here have made it a model project - a collaborative group of operators who are essentially competitors, but all have common issues and are all working together to try and solve them. I think it's just really good to see."

#### **Cleared for take-off**

Having proved the viability of BVLOS flights, 2019 saw the team ready to work on how they could be deployed in real-world use cases. The next phase of the project saw Flylogix and the Net Zero Technology Centre working with bp to conduct the world's first offshore methane emissions survey using a shore-operated UAV, flying several flights over the supermajor's west of Shetland assets.

Flylogix's system consists of a fixed-wing UAV system,

with a 3.5m wingspan. Its size and payload mean it's capable of flying more than 500km in a single flight and, crucially, still withstand the notorious weather conditions presented by environments like North Sea. The UAV is controlled from a fixed ground control station, based in this case at the airport at Scatsta, north of Lerwick on Shetland.

BP also helped connect Flylogix with the developer of the service's key enabling technology. Integrated into the airframe is an ultralight miniaturised laser spectroscope, designed and built by US company SeekOps. (A spin-out from NASA'S JPL Labs, this technology was originally developed for the Mars Rover.) In tandem with algorithmic processing and other measurements, this sensor enables the aircraft to accurately measure methane concentrations at safe stand-off distances from installations, preventing any disruption to operations whilst environmental data is collected.

A typical operation would see the UAV fly out to an offshore asset, before circling around it in a spiral. Methane concentration readings are processed alongside other measurements like windspeed and temperature, and then added to geospatial data. These parameters are then combined to create 3D layers as the aircraft flies around the asset. A combination of modelling alongside baseline empirical emissions data





then allows SeekOps to calculate an overall emission rate from the asset.

Clients can view and access this information from within Flylogix's proprietary software, called Skyspace, which forms the basis of its command and control system. It also supports secure access for customers, meaning they can login to view operations and monitor aircraft and data collection in real time.

This process was honed throughout Flylogix's 2019 flights with BP, including flights over different asset types like FPSOs. While it proved that the technology was viable, it highlighted that there was a gap between the current state of technology and a final service that could be offered to the industry at scale. "BP were quite astute and they recognised that real success meant building an industry solution, not a BP solution. That is a noteworthy point, as it lays the foundations for the projects that came after that," Chris says.

This spurred further work to refine the technical elements of the system throughout 2020, focused on two main areas. The first was to ensure the aircraft had enough range and power to reach all North Sea assets with enough fuel to allow an hour or so of data collection, which Chris says involved work on aerodynamics and satellite communications.

The second was the detection threshold. Average methane emissions reported to the UK Environmental and Emissions Monitoring System (EEMS) in 2019 stood at around 26 kilogrammes per hour, per asset. Today's best satellites – the other potential route for emissions measurement – have a detection range of about 100kg/hr (based on imaging of 50 square miles), making them less useful for monitoring individual assets. Flylogix

flights in 2019 demonstrated a detection rate of 40kg/hr which, while impressive, was still nearly double the 26kg average. "In discussion with operators, it was clear we'd need to get down to more like 10kg/hr for this to be really valuable technology that could be deployed at scale," Chris continues.

This saw significant work from SeekOps to help reduce signal-to-noise in its sensor, as well as refinements from Flylogix to dampen vibrations from the airframe. The teams also worked on new and better algorithms to help process the collected data. Meanwhile, the Net Zero Technology Centre also helped usher in new project partners to test flights, winning the backing of operators including Shell, Equinor, TotalEnergies, TAQA and Harbour Energy.

Evidently, this work has paid off. "We were delighted that when we trialled it this year the lower detection rate limit was down to 2.5kg/hr, so we are an order of magnitude less than the average UKCS platform," Chris says. "In terms of delivering value back to an operator deploying the technology that becomes a really critical factor."

### **The future of monitoring**

Having spent most of the latter half of 2020 working in the lab, spring 2021 saw the improved system back flying again, this time across the entire UKCS and covering multiple locations, asset types, and various distances from shore.

Following each of these flights, SeekOps and Flylogix sit down with each operator to discuss the results, compare the actual emissions profiles with the estimates and consider potential courses of action



Chris Adams at Flylogix  
and Charlie Booth at NZTC



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**“What we’d love is to be measuring every asset throughout the basin, what we’re noticing is that the bigger the dataset the better position you’re in, because you can start to see trends across assets and that’s really powerful.”**

for mitigation. Individually, this is a valuable service, but both organisations have seen even greater benefit come from the more collaborative group sessions where results are shared more widely.

“They decide what they can share with the rest of the consortium and then bring that to a group session where they’ll share those results and have discussion, and that’s where the real value is,” says Charlie. “They ask questions and they can bounce ideas off each other, it’s really great to see.”

It’s fair to say that this kind of openness is not the

norm for most of the industry, and Chris and Charlie are pleased and encouraged to see the group willing to share and help develop solutions that should help drive changes across the sector. Adds Chris: “The operators have been so willing to be open with each other in terms of sharing data, feedback and learning from these development cycles. They recognised very early on that there was a massive benefit to be had from sharing data. Everyone was aware of the sensitivities... but people realised very quickly if it was done in the right manner that it has tremendous value and that has massively accelerated our ability to develop this technology.”

“We really could not have done it without the Net Zero Technology Centre’s input, certainly not at this pace,” he continues. “Looking forwards, the first priority now is driving routine high-level measurement throughout the UKCS. What we’d love is to be measuring every asset throughout the basin, what we’re noticing is that the bigger the dataset the better position you’re in, because you can start to see trends across assets and that’s really powerful.”

While this project is ongoing, it is hoped that the development phase will be completed and the resulting technology ready to deploy as a service. This would see the Net Zero Technology Centre step back, having fulfilled its role as facilitator. Flylogix meanwhile, says it intends to open hubs across the UK in Shetland, Aberdeen, Norwich and Blackpool, enabling it to fly anywhere within the UKCS to support the routine measurement of assets. The proposed commercial service is priced to deliver routine measurements through the year based on individual assets, but having seen the appetite amongst operators grow during the past year, Chris says the company is “very much working to match our commercial and operational model to that industry pace.”

There are some areas requiring further work - particularly questions surrounding how these valuable collaborative discussions can be preserved once the project is ended (OGUK’s Methane Action Group has been mooted as a potential forum).






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**“To have a technology like this developed and built in the UK, then exported as a service abroad is a fantastic win for us as well.”**

Nevertheless, there will be plenty to keep Flylogix busy. 2022 will also see the first deployment of the technology overseas, and is sure to be the beginning of further demand from international operators and governments, particularly with the advent of the Oil and Gas Methane Partnership (OGMP) 2.0 Framework. This should be seen as a success not only for Flylogix, but for the rationale of the Net Zero Technology Centre and UK technology strategy more broadly.

Charlie notes: “The Net Zero Technology Centre was set up obviously very focused on the UKCS, but also for technology that is developed and built in the UK that is then deployable abroad, so that in the future we are not exporting raw oil and gas but exporting technologies and expertise from Britain as well. To have a technology like this developed and built in the UK, then exported as a service abroad is a fantastic win for us as well.”

For Chris, it also provides a vision for what the company hopes to achieve with unmanned aviation: “This project is an exciting example for us because it reaches right into the heart of our business around reimagining an industry, reinventing aviation to make it sustainable for the next 30 years - and to do that around a service which is focused on emissions reduction is a special opportunity for us.”

Alongside oil and gas, Flylogix will also continue to work on other sectors like logistics and environmental surveillance, but given its potential impact on emissions reduction, its methane measurement capabilities will no doubt remain a priority, and lasting proof of the power of collaboration, innovation and determination. 



# Exploration Conference 2022

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**This year's conference will be split into two virtual sessions on 26 and 27 January as well as a physical Exploration event later in the year!**

This event has become a key date in the exploration calendar, offering a unique opportunity for the industry to share stories on the exploration challenges in the North Sea and Atlantic Margin.

In the spirit of open collaboration, operators present case studies describing the challenges of drilling exploration and appraisal wells, offering a fascinating insight into success and failure in this challenging area. The programme will feature multiple case studies from a range of operators including oil and gas majors, independents and new entrants.

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# Automation drives better well data

A new system developed by Stuart Wright and Australian regulator NOPSEMA could help change communications around wellbore conditions, reducing time, expenditure and risk

For decades, wellbore conditions have been communicated using simplistic, not-to-scale sketches which may often conflict with actual data. As mature fields and well life extensions increasingly reach beyond 40 years of operation, wellbore data is even more vital in supporting operators' work to ensure integrity and minimise fugitive emissions. As such, the manner in which well conditions are reported, visualised and stored is a process primed for change.

OGUK member Stuart Wright is developing one possible solution. In collaboration with the Australian regulator National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA), the company has created a software tool that supports accurate, detailed reporting, by automatically generating a wellbore diagram based on a spreadsheet import. It is hoped that this system will transform government knowledge, creating a common and consistent well integrity data set for all offshore wells in Australia, with accurate wellbore drawings for all wells on the same platform.

Automation of these diagrams is crucial to managing large datasets like these in future. With millions of offshore and onshore wells in production or already abandoned (many of which are described by poor quality diagrammatic information), it is essential that wellbore data is accurate and centrally stored – but doing so using traditional methods is unlikely to be practical, or even possible.

## Control and consistency

The NOPSEMA-led project builds on Stuart Wright's existing 'Auto.Wells' wellbore visualisation software, which allows users to create detailed wellbore diagrams using data input and drawing tools. However, with more than 1,000 offshore wells for NOPSEMA to evaluate, even further automation has been necessary to expedite the process. The new system enables users to compile their data in pre-designed spreadsheets using well data already captured during routine operations. These are then returned to the regulator for import into the software system.

These spreadsheets contain unique cells for specific well data inputs, formatted to be cross-linked to the diagram generation programme. Once operators return the completed spreadsheets to the regulator, the data

is imported into a well architecture interface which replicates all of the supplied wells data in a consistent UI format within the software. The software will then automatically generate wellbore diagrams, barrier condition updates and a full well integrity report.

Stuart Wright managing & technical director Colin Stuart explains: "Following discussion with NOPSEMA, our team of engineers and developers identified that auto-generation of the wellbore diagram is possible using an Excel spreadsheet import. The team further highlighted the possibility that basic well integrity data on each well could also be compiled and communicated using the same process giving the regulator an ability to have highly accurate visual wellbore diagrams coupled to the wells' integrity status."

This status information is based on the international well integrity standard (ISO 16530-2) and can be updated on a regular basis according to the regulatory need and requirements and the operator's support.

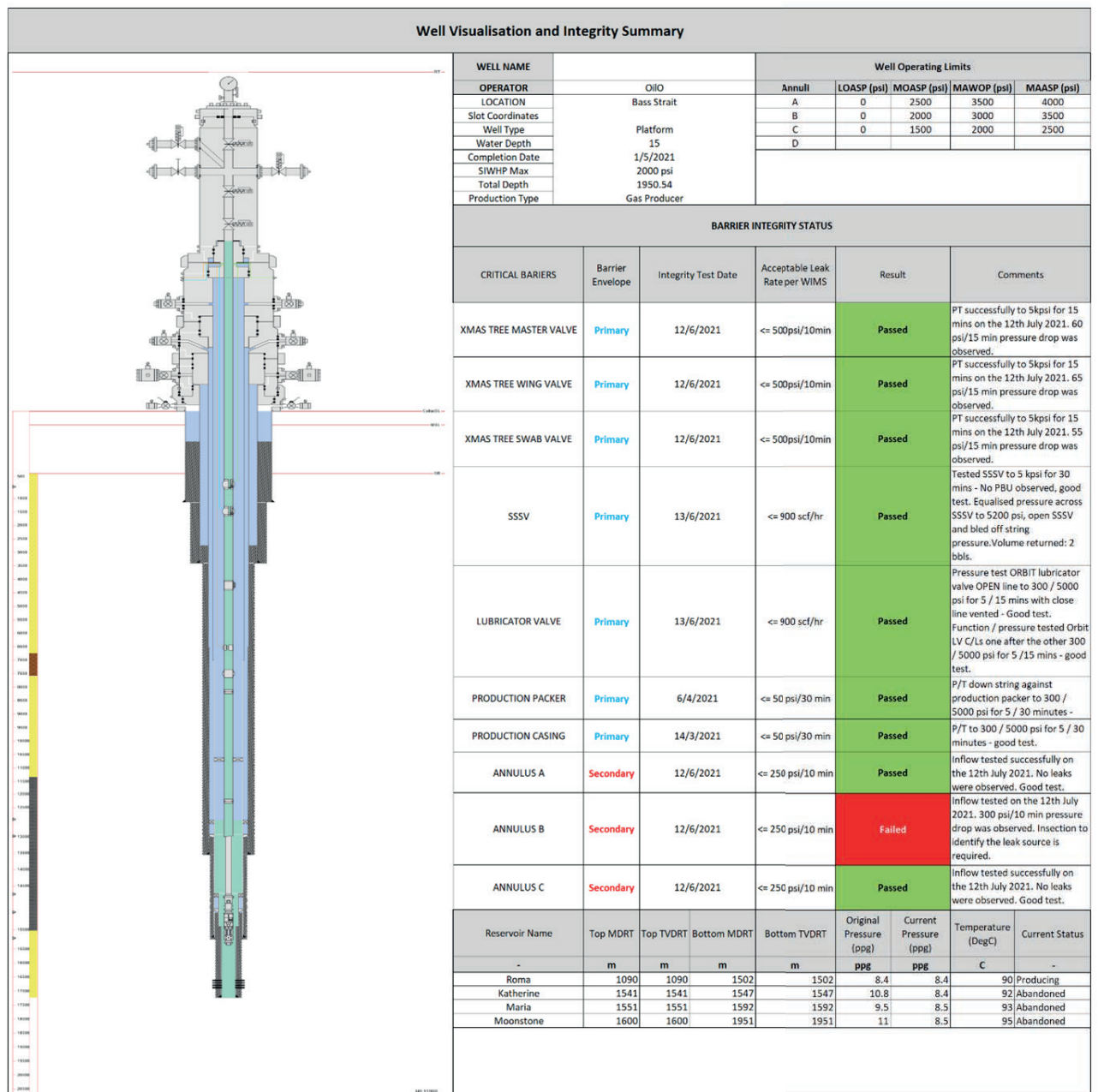
The system also includes a data integrity check which will flag any data inconsistency which prevents auto-generation of the wellbore diagram. This can be sent back to the operator for any necessary corrections to the data.

Of course, operators already have many commercial well integrity management systems (WIMS) to choose from, which allow data to be compiled, compared against internal standards and classified as to whether it is safe to keep producing, or if further diagnostics are required. One challenge for regulators is in understanding the different internal classification standards among operators. This can result in classifications, often colour-coded as green, orange or red, to be applied differently between operators according to their own senior management's view of risks.

In automating and compiling well datasets from different operators, Auto.Wells can illuminate these differences in well classification and, over time, help both operators and regulators arrive at a conclusion and consistency in understanding when a well is safe to operate.

Additionally, where swift and accurate detail of a well's integrity or compliance status is needed during well construction or intervention could also be more clearly identified and illustrated, for example during a well control or other emergency condition.





"You could argue that just having the well data of sizes, depths, heights and pressures could be enough to describe a well. That could be true if you've never had to try and use that information to analyse a problem."





Stuart Wright's Auto.Well:  
Sean Foo,  
Colin Stuart,  
John Wright,  
Yulia McGrath

The present system is not cloud-based, but output could be stored either in client servers or cloud servers as preferred.

Far from being burdensome, the hope is that the automation and consistency will benefit operators too. "For operators, whatever their size or capacity, they will all report their wells' condition against the same international standard," adds Colin. "This can really improve understanding and communication between the operator and regulator, saving both parties time and cost in avoidance of extended clarification times." For the regulator, it also dramatically reduces the cost of producing these common well data sets, saving significant time for staff.

#### Top drawer

For Colin, the system also highlights the importance of diagrams like these to engineers working in well integrity: "You could argue that just having the well data of sizes, depths, heights and pressures could be enough to describe a well. That could be true if you've never had to try and use that information to analyse a problem. The well could have pressure or corrosive fluids in a section where it is at risk of a failure and loss of containment. Understanding where elements of the well architecture sit in relationship to each other, including the drilled formations, and all constructed components cannot be understood by engineers without a diagram."

In essence, he says, the historic problem with these diagrams has been scale: how can a 5 or 10km well be accurately drawn on paper, at scale, while also including its maximum diameter of 36 inches, subsea components on the seabed, and completion components that may be 1-2 metres long? Even with the advent of computing, applications have allowed engineers to produce drawings that may be visually appealing, but are still not to scale, and do not have sufficient detail to properly analyse a problem.

"In my career I would say well problems were solved best by experienced engineers and operations staff who had great intuition and visualisation skills, but these were few and far between," he continues. "As a result, I saw many cases of failed first attempts to solve problems and associated cost overruns and higher risks, often caused by a poor initial understanding of the well condition."

This was a major impetus for the original development of Auto.Wells, which helps solve the issue of drawing quickly, accurately and at the scale and detail needed. It includes depth accuracy – including a "zoom feature"

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**"We are entering a critical decommissioning phase across the globe for hundreds of thousands of wells, many of which are over 50 years old with very poor wellbore drawings. A proper to scale drawing with critical barrier details in wellheads is vital to ensure safety of personnel conducting P&A, asset protection and prevention of uncontrolled hydrocarbon loss to the environment."**

- and has a dynamic aspect which allows the diagram to reflect changing downhole or surface intervention conditions, including barrier status.

#### Next steps

Colin believes that this automated approach could also be used for wells in production, new planned wells, interventions and well abandonments, all of which could mean significant upsides in terms of time and decision making, and the avoidance of costly delays.

The wider industry too stands to benefit, as greater consistency of data helps reduce loss of containment risks, and supports broader goals of improved reliability and dependability.

The system developed with NOPSEMA will go live in early 2022 across Australia, but Colin says similar suites could be adapted to any other regulatory regimes, or used internally by operators to help improve original well data capture and recording, thus improving and standardising their own digital wells condition communication systems. 


#### For further details contact:

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Or the Well Integrity Division at NOPSEMA, Australia





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# Close of play at COP26

The Glasgow Climate Pact was agreed at COP26 on 13 November.

It calls on 197 countries to report their progress towards more climate ambition next year, at COP27, set to take place in Egypt. The outcome also firms up the global agreement to accelerate action on climate this decade.

OGUK staff report back on the progress made











**A**t the start of 2021 OGUK committed to show-casing the positive contribution the oil and gas industry can make to the energy transition, in support of the UK government's presidency of COP26 and maximising the opportunity to present this work to UK and Scottish Governments and parliamentary stakeholders; and international partners in this year of debate on energy and climate change.

At the centre of our work this year has been the North Sea Transition Deal, the first by any G7 nation, that will accelerate the energy transition, reduce UK emissions and create new jobs across the UK. It will fundamentally commit industry to unlocking as much as £16bn in investment to bring the transition to life at pace and at scale.

A key delivery from the NSTD this year was the Methane Action Plan. On the day that international targets to reduce methane were agreed at COP26, OGUK circulated our own methane action plan to media and stakeholders. The UK industry target is to halve its methane emissions by 2030 – surpassing the international target of 30%. You can read more about the plan and this year's Economic, Environment and Energy Transition Outlook reports [here](#).

In addition to our planned activities, the OGUK

#### Key points from the agreement:

- Annual review of Nationally Determined Contributions (NDCs) – potentially bringing a more regular review of climate policy as existing annual COP meetings take on significance on the scale of the G7 and G20 summits.
- A last-minute change to a fossil fuel reference: From “phase-out of unabated coal power and of inefficient subsidies for fossil fuels” to “phase down” the use of coal.
- Commitment to £500bn in climate finance over the next five years.
- Commitment to delivering Paris agreement, embodied in the phrase “Keep 1.5 (°C) alive.”
- To develop a mechanism for international carbon trading to enable countries to meet NDCs.



Left: The SSE Hydro Conference Centre in Glasgow, home of COP26

Right: Electric Buses across the city



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**“Putting an arbitrary end to supply and production would damage livelihoods across Scotland – the same communities whose skills will be vital in helping us achieve a low-carbon economy.”**

#### **Fringe agreements**

Elsewhere in Glasgow, the Beyond Oil and Gas Alliance announced further signatories including Denmark, Costa Rica, Wales and France – countries either with little or nothing to lose from promises to cease production; or repeating existing commitments. The UK and Scottish governments have not signed – despite pressure from Denmark and non-governmental organisations. Scotland’s First Minister did announce however that the country had entered talks to work with the alliance and potentially join at a later date.

In response to the announcement, OGUK CEO Deirdre Michie said:

“The UK’s offshore oil and gas industry is changing – we are in a unique position and are helping aid the energy transition underway. While we still need oil and gas, it is far better we meet our own demand with our own resources rather than importing it, which can be far worse for the environment.

“Putting an arbitrary end to supply and production would damage livelihoods across Scotland – the same communities whose skills will be vital in helping us achieve a low-carbon economy.”

Responding to the First Minister’s remarks in the Scottish parliament on 16 November on new oil and gas fields, OGUK once again explained how stopping domestic production would do nothing to address demand for oil and gas and simply lead to increased imports, which would have a far greater carbon footprint.

Lastly, analysts have suggested that environmental governance is becoming increasingly embedded in the investment sector. In particular, they have pointed to an increasing prevalence of environmental, social and governance (ESG) frameworks in the management of investment companies, although critics have pointed out that such firms only represent a small proportion of the market.

At the start of the summit, high-profile individuals including the Prince of Wales and the UN Secretary General spoke of the need for a war-like footing to transform from fossil fuel economies to a carbon friendly future. They emphasised that every nation and sector must take immediate action to marshal global private sector investment of trillions of pounds in order to deliver the change that is needed at scale, at pace and right around the developing world.



## A softer line on coal

Coal is the most polluting fossil fuel in the global energy mix and the International Energy Agency has made clear that if it is not rapidly phased out the world has no hope of staying within 1.5 °C of global heating. To hit the target, at least 40% of the world's existing 8,500 coal-fired power plants must be closed by 2030 and no new ones built.

One of the most contentious phrases in the text produced at Glasgow was a commitment to “phase down” coal-fired power generation. Originally that was a phase-out, but India insisted on the change, despite pleas from other developing countries.

To see the scale of the challenge on talking global coal use visit this dashboard produced by Carbon Brief.

## Adaptation and climate finance

Wealthier nations agreed in 2009 that poor countries would receive at least \$100bn (£75bn) a year from 2020, from public and private sources, to help them cut emissions and cope with the impacts of the climate crisis. But by 2019, the latest year for which data is available, only \$80bn flowed.

Following the talks, an increase to \$500bn over the next five years has been promised, with more of the cash to be spent on adaptation, rather than emissions cuts. This is important because most of the climate finance that is now available goes to funding emissions-cutting projects, such as renewable energy

schemes. In middle-income countries that could often be funded easily without help, because they turn a profit. But the poorest countries who need money to adapt to the impact of extreme weather struggle to obtain any funding at all.

In the end, the text agreed to double the proportion of climate finance going to adaptation. The UN and some countries were calling for a 50:50 split between funding for emissions cuts and funding for adaptation, so this has fallen short but is still an important step.

## Reaffirming the Paris agreement

Some countries came to Glasgow opposed to stronger action and tried to suggest that focusing on 1.5 °C was “reopening the Paris agreement”, the main goal of which is to hold temperature rises “well below” 2 °C above pre-industrial levels while “pursuing efforts” to limit rises to 1.5 °C.

The UK hosts and supporters such as John Kerry of the US repeatedly pointed out that “well below” 2 °C could not mean 1.9 °C or 1.8 °C, as those were not “well below”, and that going below that got close to 1.5 °C. There are also repeated references in the text to “the best available science”, which has moved on since the Paris Agreement to show even more clearly that 1.5 °C is much safer than 2 °C and that every fraction of a degree counts.

The argument at Glasgow was firmly won in favour of 1.5 °C – which was seen as an achievement for the UK hosts.

Communications team responded to a great many reports on energy throughout the COP26 fortnight. It issued a Memorandum of Understanding with North Sea Oil and Gas Industry Associations (NOIAs) about our shared commitment to the energy transition.

OGUK CEO Deirdre Michie participated in BBC Scotland's *Debate Night*, making clear the central role that the oil and gas sector has in delivering the transition while also explaining the need for a domestic supply of oil and gas to meet our energy need. You can watch this online here. OGUK also participated, alongside some other members, in the BBC Scotland documentary “Black Black Oil”, available online.

## Emissions cuts

Current national plans on cutting emissions by 2030, known as nationally determined contributions (NDCs), are not sufficient to limit temperature rises to 1.5 °C, and according to analysis published during the talks would lead to a disastrous 2.4 °C of additional warming. India was the only major emitter to present a new NDC at the talks, so the work of getting NDCs that conform with the 1.5 °C goal was always going to stretch beyond the end of the Glasgow summit. This had been well trailed at the G20 summit at the start of November.

However, under the 2015 Paris agreement, nations are only required to return every five years to set new NDCs – and in 2025 are scheduled to discuss NDCs for beyond 2030. Sticking to that timetable would take the average global temperature rise well beyond 1.5 °C, so one of the crucial aims for the UK hosts was to draw up a roadmap for swifter revisions.

That was successful – the question of revising NDCs will be on the agenda for next year's COP, to be held in Egypt, and for the one following in 2023.

And Article 6 of the 2015 Paris Agreement, dealing with the framework of an international carbon market, also remains to be firmed up next year. Carbon trading is seen as a vital tool for countries to meet their NDCs.

This may seem like “kicking the can down the road”, but in fact provides those countries that want higher ambition on emissions cuts with an important lever to ensure laggard countries must step up. Glasgow was never going to be the endpoint in the process of tackling the climate crisis, so setting a roadmap for revisions next year, rather than several years away, is a good move.

It also suggests that domestically across the UK the architecture of climate change, environmental and energy policy making will change as a result: rather



The main entrance to COP26




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**“The UK's offshore oil and gas industry is changing – we are in a unique position and are helping aid the energy transition underway.”**

than meeting say once every five years we will see COP summits take on a greater significant and gain attention on an annual basis (smaller COP summits have been taking place annually) in the same way as the G7 and G20 summits.

Our OGUK roundtable with the *New Statesman*, Scotland Office Minister Lord Offord and others provided a timely and frank discussion on the challenges and opportunities of the energy transition.

We have been clear that our work on the energy transition doesn't end with COP26. We will keep working to deliver the North Sea Transition Deal and champion this industry's role in meeting energy demand now and in the future, while being the backbone of the transition to greener energy.

If you'd like to share your reflections on COP26 or the OGUK activity associated with the conference, please do get in touch. 



# Capturing Clusters

The concept of local Energy Clusters is one which is spreading across the UK, and increasingly going global. OGUK explores recent developments

Until the Second World War UK energy provision was largely carried out by over 1,000 local municipal power and gas companies. These companies, set up in the 19th century, operated gas works, produced methane from coal and, later, set up electricity provision. This was all changed following the establishment of integrated national transmission grids for electricity and gas that we use today. But one feature of the shift to net zero is that these more regional structures may make a comeback.

The concept of local Energy Clusters is one which is spreading across the UK, and increasingly going global. These are driven by the need to rapidly achieve economies of scale in new technologies, particularly in carbon capture and hydrogen production where new networks need to be developed quickly, just like in the early days of gas and power.

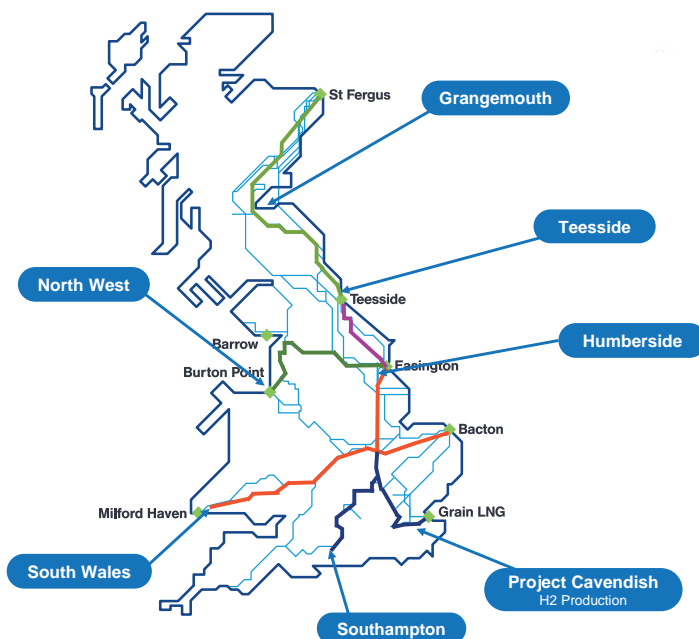
Governments and businesses at national, devolved and regional level are already active. Some priority locations have already been identified for this type of approach, usually associated with main concentrations of industrial emissions which will need these technologies as a priority: North East Scotland, Merseyside, Humberside, Teesside and South Wales. However, the concept is catching on fast as so-called Local Energy Partnerships (LEPs) are springing up in East Anglia around Bacton and Felixstowe and the Thames Estuary region which have less of a purely industrial heritage.

The first set of CCUS and Hydrogen Clusters has now gone through a sequencing process which will determine the extent and timing of government support. Both the infrastructure element and capture projects for industry and power generation will require new regulatory regimes and a revenue model to cover their additional costs. In the longer term, and as carbon markets develop it is expected that such activities will become more Business as Usual.

The cluster approach is also about integrating different energy markets. As renewable electricity grows substantially, the idea is also to concentrate economic activity around key energy rich locations.

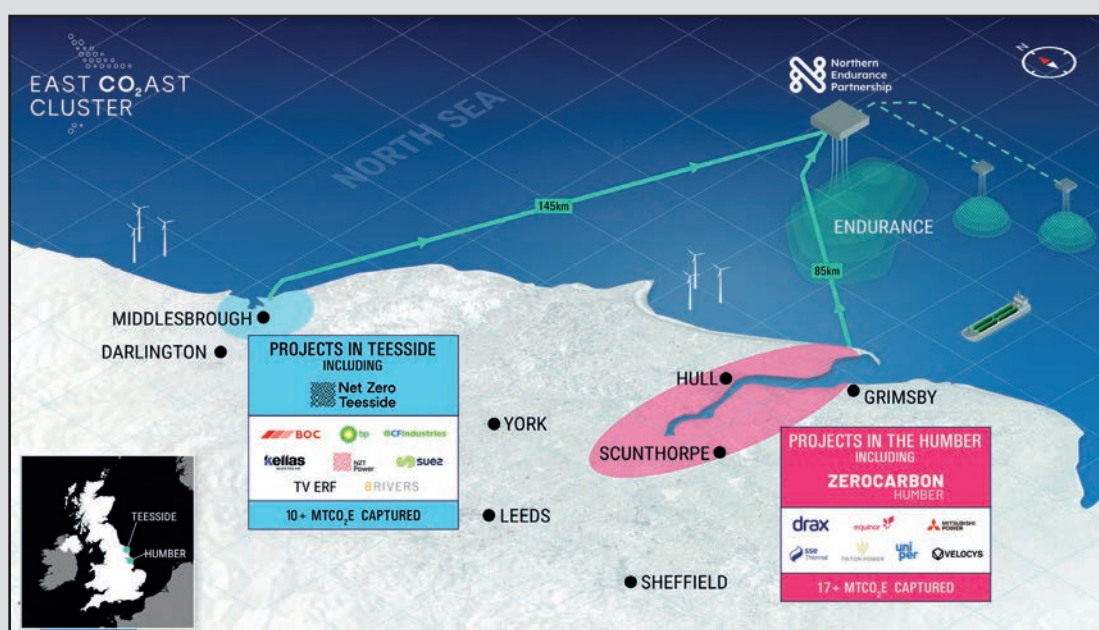
The East Coast Cluster around Humberside and Teesside includes a range of new energy projects. These will be based around both the growing wind industry in that location as well as the development of new CO<sub>2</sub> transport and storage infrastructure being carried out by the Northern Endurance Partnership. There are now three potential hydrogen production facilities, electricity production (including Drax the largest power station in Europe) and several industrial carbon capture projects that will be linked up to new pipeline infrastructure. Meanwhile local energy consumers in those regions may be among the first to be offered hydrogen for home heating purposes via the local gas distribution networks.

These projects may, to some degree, also shake up the way in which energy markets are organised. One feature of this new arrangement is that longer term relationships be re-emerge between energy producers, local industries and consumers. It is no surprise



Developing a UK hydrogen backbone  
Source: National Grid





### ECC wins first tranche

The East Coast Cluster (ECC) announced its successful bid for financial support from the government on October 19. It said this was a “major step” on the way to the UK government’s ambition to establish the first ‘net zero’ carbon industrial cluster in the UK by 2040. It also says it is a “significant boost” for the industrial heartlands of Teesside and the Humber (see map).

It will support low-carbon industry and power projects across the region, including those in Net Zero Teesside and Zero Carbon Humber, two of the country’s leading industrial decarbonisation proposals.

It says it will have the potential to transport and securely store almost half of all UK industrial cluster CO<sub>2</sub> emissions – up to 27 million tonnes/year by 2030 -- and create tens of thousands of jobs. It will also kick-start the hydrogen economy, supporting the creation of projects that could deliver 70% of the UK’s hydrogen target for 2030.


ECC is a joint project led by BP. Its other partners are fellow upstream companies Eni, Equinor Shell and Total; and the high pressure national gas network operator National Grid.

Since the announcement, the government has also published its business plan for prospective CO<sub>2</sub> transport and storage operators (see page 8). Like BP, it expects the various future, localised grids eventually to merge.

**One feature of this new arrangement is that longer term relationships be re-emerge between energy producers, local industries and consumers.**

therefore that local distribution companies are also active participants in emerging cluster projects. So its not quite “back to the future” but after three decades of effort to develop and improve national energy markets (not all of which have been perceived as successful) we may be entering a new era of regional energy policy in the form of the cluster approach.

For our own oil and gas sector this will involve some degree of change. For example, operators have been used to selling into large energy markets and having wholesale commodity products like NBP day ahead and forward markets in which to sell natural gas. Integration between different segments also means becoming familiar with electricity markets, which are similar in some ways, but very different in many others.

As part of the North Sea Transition Deal our sector is committed to supporting all of these changes in order to decarbonise both our own production and help the process in the wider economy. Clusters will be a key part of our industry going forward. 



# Aberdeen Harbour: Quay to transition

A sweep of rocky coastline at Aberdeen is being transformed into a major new piece of marine infrastructure – with the energy transition very much in mind.

*Wireline* finds out more about a large-scale harbour expansion project that represents an investment in the future...

**T**he changing profile of customer assets and operations – ever larger vessels, ever more complex and challenging projects – was among the original drivers when Aberdeen Harbour Board began looking at potential expansion options nearly a decade ago. Over recent years, however, the growing impetus behind the energy transition has further served to position the project as a strategically critical investment – not just for the port and the regional economy, but for the UK energy industry as a whole.

The board, after a careful process of studies, assessments and consultations, settled on a natural bay at nearby Nigg as the optimum location for a development that, according to independent estimates, could generate an additional £1 billion per year for the economy by 2035 and create a further 7,000 equivalent jobs.

Construction work on the £350mn Aberdeen Harbour Expansion Project (AHEP), just a short distance south of the existing port, got formally under way in 2017. Now called South Harbour, it is taking recognisable shape as a new facility equipped to support a variety of maritime sectors.

When it opens for business in Q4 2022, however, its prime focus will be upon servicing the energy industry across the spectrum of its activities.

## **New depths**

The harbour's Business and Innovation Manager, Luigi Napolitano, says that the existing harbour did not have enough space or water depth for an expansion. "However, the energy transition agenda has added greatly to the case for this investment," he adds. "The expansion significantly adds to the overall infrastructure required for the transition – it positions Aberdeen perfectly to support the UK push towards net zero."

The expansion will feature a total of 1.4km of space along four stretches of quay – named Balmoral, Dunnottar, Crathes and Castlegate – at water depths of up to 15m. It will be able to host vessels up to 300 metres long, a marked difference compared with the existing port maximum of 165m.

Protected by over 1.3km of breakwater and with a channel width of 165 metres, it will also – crucially – encompass 125,000m<sup>2</sup> of laydown area and heavy lift zones able to accommodate up to 15 tonnes/m<sup>2</sup>.

Luigi says South Harbour will be positioned primarily as an energy projects base, equipped to support the construction and servicing of wind or tidal developments from Aberdeen, as well as oil and gas projects, decommissioning programmes and operations & maintenance (O&M) scopes. The expanded quay space will also allow it to host a larger breadth of assets, ranging from barges to jack-ups and floating production, storage and offtake vessels (FPSOs).

"It hugely increases the scope of what we can do in Aberdeen because of its scale and capacity," adds Luigi. "Beyond the quay space and water depth, the laydown areas are key in that respect – they provide the elbow room required to facilitate the entire project environment."

Aberdeen Harbour, of course, is already a key support base for the energy industry in the UK and internationally, across operations support and maintenance, and it sees the new development as complementary to its current services.

"Our focus is on leveraging the strengths of both to maximise the opportunities for us," says Luigi. "The expansion is becoming known as South Harbour and the existing facilities will be called North Harbour, and they will operate as one integrated entity – the new development simply broadens our overall capabilities."





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**"It hugely increases the scope of what we can do in Aberdeen because of its scale and capacity."**

#### **Through the transition and beyond**

The largest ongoing marine infrastructure project in the UK, and recognised by the Scottish Government as an infrastructure project with national significance, South Harbour is also being marketed in other sectors such as the cruise industry. Cruise liners, in fact, are already booked in to use it once it's open for business.

The primary focus on the energy industry, however, is also helping to fuel further value-adding dimensions – not least the planned formation of an Energy Transition Zone (ETZ) in the area immediately adjacent to the expansion. This sector will be dedicated to the development, production, assembly and storage of infrastructure needed to support the energy transition, including the renewable energy industry.

Earlier this year the Scottish government announced a £26mn investment in the ETZ from its Energy Transition Fund, in support of the initiative's ambition of creating an integrated energy cluster that helps to expedite the journey to net zero. The





UK government has committed to similar levels of funding support.

“The Energy Transition Zone is anticipated to be a centre of excellence for high-value manufacturing and services support for renewables in particular,” says Luigi. “The port expansion is the primary reason why the zone has moved forward as a concept in this location – making use of neighbouring land, and combining it with the new port capabilities, to help drive the transition and optimise economic development.”

The harbour has been working with a variety of organisations, including OGUK, the Net Zero Technology Centre and Opportunity North East, to help shape and realise the project’s strategic goals.

“The development represents an economic vehicle, facilitating the flow of products, materials and services in and out of the area,” says Luigi. “By working closely with trade bodies and other organisations, we’re maintaining close links to the hinterland – in particular the supply chain – and that is key for the port to function effectively and achieve its potential.

“It paves the way for supply chain companies to contribute even more to the energy transition. Many of them will already be focused on it, but it creates many new opportunities because it can host much larger projects.”

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## **“It paves the way for supply chain companies to contribute even more to the energy transition.”**

The local contracting community has also benefited directly from the construction work itself, with numerous businesses supporting a programme that has made significant progress over recent months.

All work at the development has been carried out in line with COVID-19 government guidelines, although the schedule has inevitably been impacted by the pandemic. There have been associated contractor-related challenges, prompting a reshaping of the contracting arrangements last year, though physical work has continued apace (see *boxout*).

However, all marine operations are now complete and the focus is now on land-based work to create



The South Harbour  
as it will look



shore infrastructure ahead of next year's opening. This will involve scopes ranging from infill operations behind the quays to additional construction work at the quays and laydown areas, as well as the introduction of utilities. There remains a constant focus on environmental issues; the project team

### Aberdeen Harbour

The project reached a key milestone this summer when the last of 22 huge concrete caissons – fundamental elements of the harbour structure – arrived on site and was secured in place.

The 8,000-tonne blocks were made in Spain and transferred to the Cromarty Firth for storage, before being individually towed to Aberdeen.

The caissons – central to the port's heavy lift capacity – are each around 50m in length and up to 15 metres in width and depth.


Meanwhile, more than 9,000 accropodes have been made for the north and south breakwaters at South Harbour, to help protect quayside operations from large waves. The biggest of the specially built concrete blocks weigh 34 tonnes.

includes a dedicated environmental manager responsible for minimising the impact of the construction phases.

Indeed, this September also saw the appointment of a new chief executive for the harbour, Bob Sanguinetti. Having joined from the UK Chamber of Shipping, he arrives in time to oversee the completion of works and the beginning of full operations – described by the board as “one of the most pivotal points in the port's history.”

“The development as a whole is very exciting for everyone involved,” says Luigi. “There's a real buzz of positivity around it. Construction has made phenomenal progress in recent months and people can begin to see what it's all about – they can see the huge potential it holds.

“We're detecting a lot of enthusiasm for it in the market and we know that projects are already being planned with the new port in mind.

“But it's not just for the short or medium term – this is helping to future-proof Aberdeen economically and giving the energy supply chain further reason to be confident about the future. Aberdeen Harbour is a trust, so we're focused on a long-term vision and ambitions – the harbour dates back to 1136 and we plan to be around for quite some time yet.” 







# Lifting expectations at Brae Bravo



Summer 2021 saw the first phase of removals at the TAQA-operated Brae field. *Wireline* explores the lessons learned from Brae Bravo, and what it means for the company's wider decommissioning strategy.



While new developments on the UK continental shelf (UKCS) have slowed somewhat over the past 18 months, decommissioning activity has, for the most part, continued to progress. 2020 did see several cessation of production (CoP) dates slide into the future, but removals activity continued apace, with the successful removal of 15 topsides including Guinevere, Viking, Brent Alpha and Ninian Northern, among others.

The uncertainty caused by COVID-19 is borne out by recent data. OGUK's *Decommissioning Insight 2021* estimated that the total amount spent on decommissioning fell by around 30% last year, to £1.1bn, and that annual spend would plateau at around £1.2bn in 2022 and 2023. Encouragingly however, in its UKCS Decommissioning Cost Estimate Report, the OGA also reported a 19% reduction in the overall cost of decommissioning since 2017, bringing the industry more than halfway toward its 35% target by 2022. And with more than £15bn forecast to spent on decommissioning in the UKCS alone over the next ten years, there remains plenty of work to get on with.

One example is at the TAQA-operated Brae area fields, where this summer saw the successful removal of the Brae Bravo topsides, during the second part of a three-phase decommissioning campaign set to conclude in 2022. *Wireline* spoke with TAQA staff to learn more about the history of Brae, and what the project means for the operator.

### Marathon running

Discovered in the mid-70s, the Brae field is located about 170 miles north east of Aberdeen in blocks 16/7a, 16/3a and 16/3b, and lies in water depth of around 100 metres. Operated by Marathon Oil for most of its life, the Brae Area features three installations - Alpha, Bravo and East - which tap resources spread across the field and provide processing facilities and export lines for several other nearby assets across this portion of the Central North Sea.

Producing both oil and gas, field infrastructure is diverse. Oil from Brae Alpha is exported via the Forties Pipeline System to Cruden Bay, while gas flows out through Scottish Area Gas Evacuation (SAGE) pipeline to St Fergus via East Brae. The Bravo platform was installed in 1987 to target gas condensate and, owing to its bridge and its flare, remained an iconic piece of offshore infrastructure until its removal this year. First

oil was reached on 13 April 1988, while peak production reached 94,567 barrels of oil equivalent/day (boe/d), and an estimated 500mn boe over its lifetime.

Marathon Oil operated the field for decades until its acquisition by RockRose Energy in 2019, while other equity partners included JX Nippon, Spirit Energy and TAQA, which acquired shares via transactions with Talisman in 2008 and BP in 2013. For most of the last decade, the Abu Dhabi-based energy group has been the largest equity holder in the field while remaining a non-operator partner. TAQA UK's CFO and Decommissioning Director in the UK, Iain Lewis, described this as a unique position. But this changed as TAQA formally became operator in October 2020.

Such longevity of operatorship under Marathon is unusual in the UKCS. "Up until the point that RockRose took over in 2019, Marathon drilled, designed, installed and operated the Brae fields," explains TAQA's UK decommissioning project manager Chris Wicks, who has spent 20 years working at the field in a variety of roles. "The history belonged to one operator up until the transition, which actually makes for a very interesting timeline - and all that data hasn't been lost to the annals of time. We still have people now in TAQA who were around for the commissioning of East Brae, so we have long-served corporate knowledge still within the company."

That knowledge has proved invaluable in taking on a decommissioning project of some complexity. While only Bravo has been progressed to decommissioning, the decades of infrastructure that surround it require careful management to ensure other assets continue to function. Chris added: "That's the real challenge here - the unknitting of facilities that have been there 30-plus years. We have maximised everything we can from round about and supporting third parties where we can, modifying platforms to support that and that adds complication when you come to unknit them."

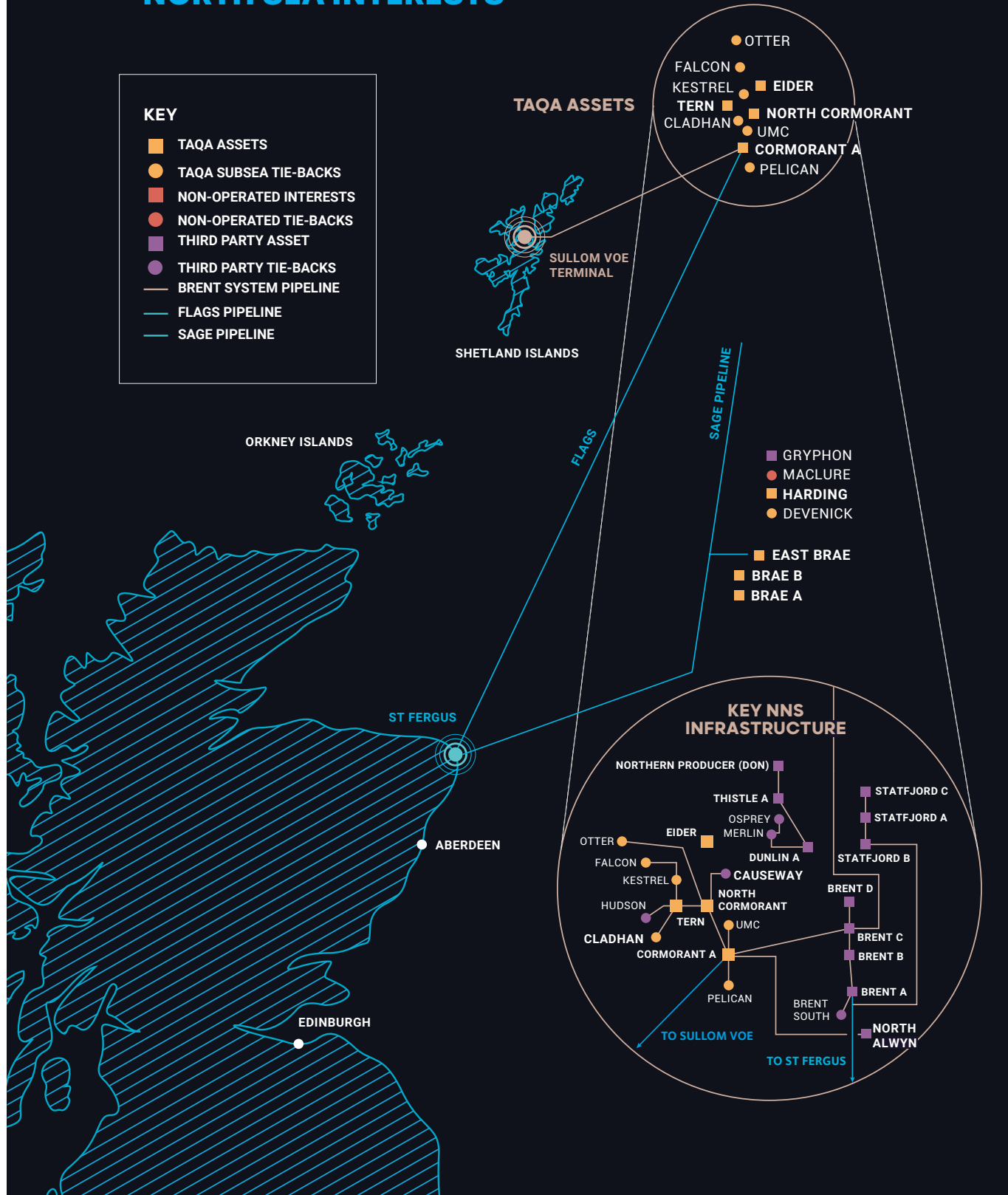
### Removal and disposal

CoP plans for Bravo were submitted by Marathon in 2016, before third-party production and exports ceased in July 2018 and native production stopped in December 2018. After Marathon's well decommissioning work was concluded, Chris and his team conducted nearly 12 further months of work to down-man and make safe the asset, before Bravo was finally disembarked in July 2019. It remained unattended until removal operations began in 2021.

This portion of the project was not without its own



## TAQA'S UK NORTH SEA INTERESTS







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**"If you think about [the accommodation module], people have lived and socialised on that for 30 years, that is a home, not just a platform."**

challenges. For example a new gas bypass line had to be laid around Brae Bravo to allow it to be removed without interrupting the supply of gas between the East Brae and Brae Alpha platforms - a sizeable scope of work for a project focused on taking infrastructure out of commission.

Marathon had already enlisted a group of contractors to help carry out removal and disposal scopes, including HAF, the Heerema Marine Contractor (HMC) and AF Offshore Decom (AFOD) consortium. HMC brought with it two semi-submersible crane vessels (SSCVs), *Thialf* and *Sleipnir*, both well used to major offshore decommissioning operations.

The Bravo platform itself comprises a 22,000-tonne jacket and three-tier topsides with a combined weight of 36,000 tonnes, in addition to its iconic flare tower and steel connecting bridge. The removal of the Brae Bravo topsides represents one of the largest topsides removed so far on the UKCS.



First phase removals at the Brae Bravo field



As in many other projects, the removals process involved cutting the platform topsides away from the jacket and lifting them off, allowing the full unit to be transported to land and dismantled. Yet despite the familiarity of technique, there are still new technical feats being achieved.

“Some of the lifts were very novel,” Chris explains. “Brae Bravo is very big and it’s actually two modular support frames (MSFs). The bottom layer of the platform topsides run the full length north to south, but they have eight or so modules on top. It’s like Lego, so instead of lifting all top eight modules individually, they used the wider bottom module to lift two of the upper modules as well, resulting in a combined lift. This combined set of modules was lifted by using both of *Sleipnir*’s cranes simultaneously.” In total, two combined lifts were completed (one for each MSF), each weighing some 8,000 tonnes.

The operation also represented a monumental effort in personnel movement with up to 500 people working on the project. To put this into perspective, this was a level of manning only seen a handful of times in *Thialf*’s 36-year history, according to Chris.

“We executed about 400,000 man-hours without any major incidents recorded in about eight to nine weeks,” Chris reflects. He credits the ongoing relationship and dialogue with contractors: “I think that’s what made it successful – that conversation, trust and ongoing relationship.”

The topsides have now made their way to Vats, Norway, where they are being dismantled. TAQA is aiming for a 95% recycle target for recovered materials. The recovered steel will also be processed at a smelter close to the dismantling yard where possible, which Iain notes is an added benefit in terms of carbon and transit costs.

Meanwhile, the remaining jacket (shown on page opposite, following the topsides removal) has been fitted with a navigational aid and will be left in place until summer 2022, before being lifted away in the final phase of the removals campaign.

### Turning the tanker

Even amongst the frantic activity of this summer, Chris is keen to impress this is just a small window during a prolonged piece of work. “It’s all very well seeing the cranes lift everything, which is great and very visual, but the real work is the first seven years and the next year,” he says. “The eight weeks is complicated and where the risk is in terms of people, but it’s only eight weeks.”

It is important to consider the long-term nature of this work given TAQA’s decommissioning portfolio (the largest of any operator in the basin over the coming decade). It’s for that reason that the company has taken a more strategic approach to managing its decom operations, with the decommissioning team acting as a centralised and accountable point for all decommissioning activity. Iain explains: “We’ve set up the decommissioning directorate within TAQA to ensure business focus on decommissioning activity. One of the great difficulties that operators have is moving their business from being purely an E&P company to a decommissioning company as well... You are turning around a tanker in lots of ways as it’s not the way oil and gas companies are designed. It requires clear accountability and drive throughout to efficiently execute the programme.”

Given the need for decommissioning projects to draw on all aspects of the business - from finance commitments to wells work, to HSE - Iain is able to draw on these resources as internal service providers



Jacket lift taking place





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## **"The Brae Bravo experience gives us removal experience right through the project phase now as well, so we now have essentially done every aspect of decommissioning of large-scale facilities."**

to decommissioning, rather than rely on either external managers and contractors, or multi-department project teams.

"There's such interdependence across the operations [that] there is a lot of lost value in leaving those in disparate parts of the organisation not reporting to one ultimate accountable authority," he continues. "We took the view that decommissioning is not primarily a technical project – there are obviously technical elements to it, but it's as much about operations, wells, stakeholder engagement, supply chain management, regulatory and environmental interfaces and more. There are so many aspects that having one accountable team looking after it all, we believe, is the most efficient way."

In doing so, Iain says this small team – there are fewer than 20 people in the decommissioning department – can make decisions and better control budgets, with the appropriate level of accountability. "That's hugely valuable: we believe in driving the right behaviours, making sure of mindset changes, and getting what we need done at the right time for TAQA," he adds.


This strategy is demonstrating success, and Iain believes that the process can be replicated across the portfolio. "The Brae Bravo removal project means that TAQA has essentially done every aspect of decommissioning of large-scale facilities," he says. "We're now in the position of being able to put together our blueprint of how we want to do this, to learn lessons of what we've done well and what we could've done better and improve the process as we move forward to the rest of the program."

It's all the more impressive against the backdrop of COVID and the past 18 months, as the project team adapted not only to two new parent companies, but also to travel disruption and remote working. "We transitioned companies and delivered this project, all on Microsoft Teams," Chris reflects. "It just shows the professionalism of all parties, from TAQA to the contractors and sub-contractors. That 400,000 hours were executed without any significant safety issues – and on time and budget despite COVID disruption – is indeed something to be very proud of."



Beyond the technical elements of this project, there are also emotional connections. Chris and many of his colleagues have spent much of their working lives on and around the field, and whether at TAQA or Marathon, these are important ties. He recalls the crew leaving the platform for the final time in 2019: "I was at the heliport when the last helicopter landed and the crew came off and we were welcoming them back. They're all long served 'tough' offshore workers, but they all had a tear their eyes and so did we – it's really emotional."

The successful removal of the topsides at Brae is therefore bittersweet. "If you think about [the accommodation module], people have lived and socialised on that for 30 years, that is a home, not just a platform," he says.

Overall, the Brae experience has been instructional, opines Iain. "We've learned a number of lessons – mostly small things we'd do differently – but I think overall the lesson is to do the same thing again with some slight adjustments. However, we couldn't have done it without the support, commitment, and professionalism of the teams and individuals, on and offshore, throughout the last seven plus years." 



*Our industry is changing.  
Join us.*



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