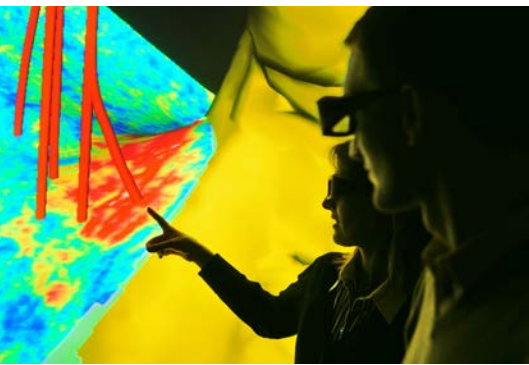




HM Government

Industrial Strategy: government and industry in partnership



UK Oil and Gas

Business and Government Action

March 2013

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1. Foreword

“It is a huge national advantage having such a brilliant oil and gas industry” – the Rt Hon David Cameron MP, Prime Minister, 13 October 2011.

The words of the Prime Minister rightly sum up the contribution the oil and gas sector has made to the UK economy over the past five decades. There is no other industrial sector which has created more prosperity for the United Kingdom.

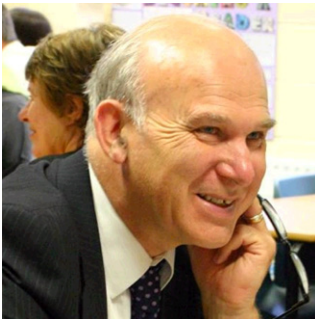
As the UK pursues a long-term process to decarbonise our society, we will need substantial amounts of oil and gas. Gas will assist, for example, the transition away from coal powered generation. Low-carbon transport is unlikely to replace all petrol and diesel vehicles for two or more decades. Britain’s energy security and long-term economic performance will benefit hugely from maintaining the health of this key industrial sector.

The UK Government is committed to working with the oil and gas industry to create the right conditions to maximise opportunity and investment to the benefit of the whole UK economy. By utilising the strength and scale of the UK we can ensure that the energy sector as a whole continues to thrive and deliver.

This strategy is jointly owned by Government and industry. It has the following aims:

1. To maximise the economic production of the UK’s offshore oil and gas resources;
2. To sustain and promote the growth of the UK industry’s supply chain, in both domestic and international markets;
3. To promote purposeful collaboration across industry and between industry and Government.

This strategy’s goal is to put Government and industry on the right path to ensure future decades of investment and production in the North Sea. Quite simply, we want to maximise economic recovery of oil and gas from the UK Continental Shelf (UKCS) and support a dynamic supply chain which sustains high quality jobs in the UK.



The Rt Hon Dr Vince Cable MP, Secretary of State for Business, Innovation, and Skills



The Rt Hon Edward Davey MP, Secretary of State for Energy and Climate Change



The Rt Hon Michael Moore MP, Secretary of State for Scotland



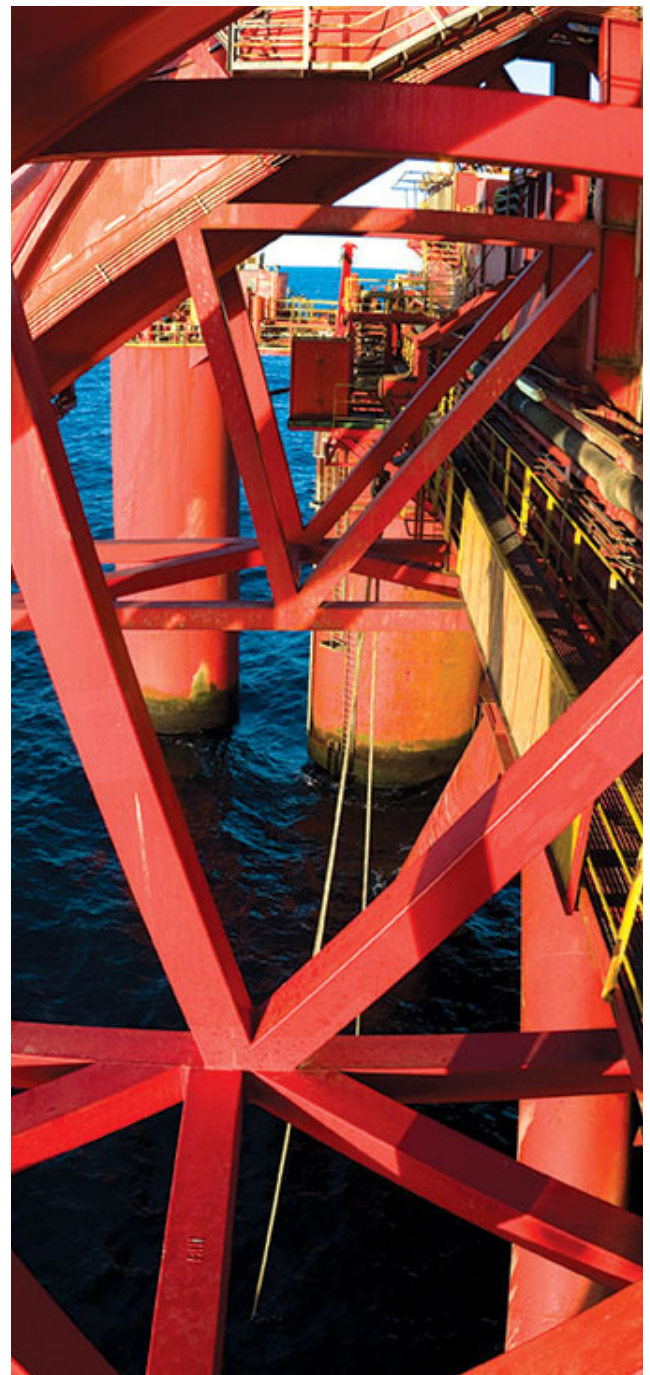
Mr Gordon Ballard, Chairman of the Oil and Gas Industry Council

2. Underlying Rationale

The rationale behind these strategic aims is as follows:

1. To maximise the economic production of the UK's offshore oil and gas resources
 - There is an over-riding case to maximise recovery of the UK's oil and gas with 70 per cent of British energy requirements still likely to be met by oil and gas into the 2040s.¹
 - Maximising domestic supplies of oil and gas, including both offshore and onshore unconventional resources, leads to increased resilience and security for the UK's energy needs when compared with imports.
 - Stemming the rate of decline of oil and gas production from the UKCS has the potential to increase greatly UK tax receipts, not only by way of production taxes but also through corporation tax payments from the supply chain and employment taxes. Looking solely at production taxes, projects recently approved in 2011 and 2012 alone will generate an additional £25 billion in tax.²
 - Extending the economic life of a field also results in the deferral of decommissioning costs.
2. To sustain and promote the growth of the UK industry's supply chain, in both domestic and international markets
 - The UK supply chain is integral to the success of the UKCS. Industry and Government recognise that supporting the UK supply chain domestically will have positive spill over effects on ultimate recovery from the basin, UK GDP, employment and taxes.
 - The UK supply chain is well positioned across the value chain with 1,100 companies achieving combined revenues of £27 billion in 2011³.
 - It is internationally recognised as a global leader in subsea engineering and a centre of excellence in project management, design engineering, asset and operational management, design and manufacturing of advanced equipment, research and development, safety management training and education and professional and financial services.
3. To promote purposeful collaboration across industry and between industry and Government
 - The challenges facing the basin have continually evolved. Future discoveries and average field sizes will be more technically and commercially challenging and new markets such as decommissioning will emerge. In order to align with the shifting dynamics of the basin, industry will need to collaborate further.

- The industry already has important linkages with UK Government departments: DECC, HMT and DWP/ HSE and with the Scottish Government. Together these cover the areas of licensing, environmental performance, health and safety, and fiscal matters. However there is space for greater collaboration between industry and BIS on matters such as skills, technology and access to finance.
- A stronger link with industry and Government, including UK Trade and Investment (UKTI), will support the industry's export ambitions.



3. Strategy Overview

The UK's world class oil and gas industry, comprising both production and the essential support services, is a vital part of the economy and the focus of this strategy.

The SWOT section in Annex 'B' looks ahead to future potential opportunities and threats and also gives a snapshot of the strengths and weaknesses present today.

The industry:

- Provides a source of employment for over 400 thousand people across the UK (45% Scotland and 55% England, Wales and Northern Ireland)⁴
- Is Britain's largest industrial investor and is investing more than ever before (£11.5 billion in 2012 and DECC forecasts investment of £14 billion in 2013)⁵.
- Meets almost one half of the UK's total primary energy needs.
- Boosts the balance of payments by almost £50 billion a year, according to industry estimates, by reducing oil and gas imports, and by exporting goods around the world.
- Has a strong domestic supply chain that has seen revenue growth each year since 2008, reaching £27 billion in 2011³.

The strategy will support objective, well-informed policy making across Government for the oil and gas sector.

It sets out a number of specific actions which formalise this closer collaboration between Government and industry. Some, such as those aimed at developing the skills required and improving access to finance, are already used in other sectors of the economy and are applicable to oil and gas. Others, such as offshore safety and decommissioning are specific to the oil and gas sector.

The Maintenance and Reviewing Process for this Strategy

Government and industry have come together in the form of the new Oil and Gas Industry Council, which is co-chaired by BIS, DECC and a leading member of the oil and gas industry. The Council, whose membership comprises Ministers, officials and key industry players, will provide the leadership needed to drive implementation of this strategy. In particular it will establish the mechanisms and resources needed to deliver the actions listed, develop success criteria by which to check on progress and publish reports from time to time.

Following the launch of this strategy, the Industry Council will meet to prioritise the actions and assign responsibility to the relevant industry and Government stakeholders, except for the fiscal regime actions which are the responsibility of HM Treasury. The Industry Council will determine, and publish, appropriate success measures and when they are to be met.

The ongoing review cycle for this strategy will be as follows:

- The Industry Council will meet three times a year to monitor progress of each of the agreed projects supporting the aims of the strategy using a 'traffic light system'.
- The strategy will be reviewed annually, and where appropriate, revised, to ensure that it is a living document.



Image courtesy of Water Weights Limited

Action Plan

This strategy's overarching aims are supported by a series of initiatives which are grouped under the following headings:

- Safety,
- UK Supply Chain: Domestic and International Growth,
- PILOT,
- Access to Finance,
- Technology,
- Skills,
- Awareness of the Industry,
- Engaging with other Industries,
- Decommissioning,
- Fiscal Regime.

Through the Fiscal Forum and extensions to field allowances, the UK Government has worked with the sector to maintain an understandable and stable fiscal environment to encourage growth and allow business to invest with confidence. Government provides the leadership required to deliver the UK's energy and wider prosperity goals. The Energy Bill 2013 and the Gas Generation Strategy of November 2012 set out a clear direction to deliver sustainable, affordable and low carbon energy for the UK. The oil and gas sector has a central role to play in delivering this for the country.

The Scottish Government published a Scottish industry led Oil and Gas strategy in May 2012. This focused on many of the themes to be found in this strategy. As a number of the above issues are of a devolved nature, full delivery across the UK will be dependent on a close relationship with the Scottish Government. BIS and DECC already have a good working relationship with Scottish Enterprise. The strategy

implementation will need to look at how to formalise that relationship.

This strategy is the start of a new approach which will show how industry and Government are working together. Given the importance of the upstream oil and gas sector to national and local growth throughout the UK and to security of supply, the work of the Oil and Gas Industry Council will be supported by a cross-party group of Members of Parliament. Terms of reference and membership of this group will be published by DECC and BIS in due course, but the group's role will encompass:

- liaising directly with industry to proactively drive forward the aims and ambitions of the oil and gas industry;
- providing a forum for discussing the barriers and constraints within the oil and gas supply chain and commission work to mitigate these;
- identifying prospects for collaborative working including diversification into renewable sectors;
- providing guidance and intelligence to inform the direction and work of the Council.

The chair of the group will be invited to attend Council meetings.

4. Safety

Aims Supported 1, 2, 3

Status:

Safety is a priority for this industry and as such is fundamental to all offshore activities. Industry has shown it is willing to collaborate fully on all safety-related matters to ensure the wellbeing of its workforce. As well as keeping people and the environment safe; good health, safety and environmental practices are a precursor to increased asset use and are key selection criteria in the supply chain procurement processes.

Safety is subject to continuous improvement and assets are ageing, thereby providing a constant challenge. Effective asset integrity, life extension management and safety system implementation are seen as a strength in the UK. This strength is not an isolated example of good practice, but symptomatic of a health and safety regime and culture that are recognised as world-leading and which are supported by a legal framework that drives continuous improvement.

Step Change in Safety, the industry's flagship safety initiative, was set up in 1997 with the aim of making the UK the safest place to work in the worldwide oil and gas industry. In the ten years following Step Change's creation, the industry saw significant improvements in the fatal and major injury rate, which fell by almost 70% in this time⁶. The numbers of major and significant hydrocarbon releases, which are the potential precursors to a major accident, were also substantially reduced in this period. Safer operations not only gets people home, but also results in improved public confidence in the industry and helps create a stable environment for investment

and growth. The Step Change Leadership team includes representatives from industry, trade unions, workforce and the Regulators. Current workstreams include the development of a practical guide for workforce engagement, the raising of awareness and understanding of how human factors and behaviours from boardroom to worksite can cause accidents; helicopter safety; and asset integrity.

Goals:

Maintain the strong safety culture and ensure the industry continues to invest money and effort in safety and asset integrity through to the point of decommissioning.

The industry, regulators and trade unions share a common goal in seeking continuous improvement through development of collaborative solutions in all aspects of health and safety. This is an ongoing target supported by the goal setting regulatory framework put in place following Piper Alpha and the Lord Cullen Inquiry. Companies have individual targets to align with their own risk profiles and time frames. However in 2010, the industry set a target to reduce the numbers of hydrocarbon releases by 50% over a three-year period; the industry is well on the way to achieving this target.

The EU proposes to implement an Europe-wide safety directive which will govern health and safety practices. This will impact UK industry. Government, Industry, regulators and trade unions are unanimously in favour of ensuring a seamless transposition of the Directive and integration into UK law, without adverse effects on the existing world-class UK safety regime.

Projects and responsibilities:

Action:

Target date:

Responsibility:

Implement all programmes and initiatives agreed under Step Change in Safety.

Ongoing

Step Change in Safety

5. UK Supply Chain: Domestic and International Growth

Aims Supported 1, 2

Status:

The development and deployment of the UK supply chain is closely linked to UKCS activity. With investment in the UKCS at record levels – coupled with the developing and growing offshore renewable sector – the UK supply chain, which recorded revenues of over £27 billion in 2011³, has the potential to contribute significantly to the growth of the UK economy in the coming decades.

There is a case for refocused Government attention on UK content. Converting the current high investment figures into British jobs is important to the economy and an issue Government cares about. Building on current DECC initiatives, and working closely with those awarding contracts in the UKCS, will provide a better understanding of the strengths and weaknesses of the UK supply chain. The development and deployment of the UK supply chain is as important as securing investment in the UKCS. The two can, and should, go hand in hand. While decisions have to be made on competitive grounds, the Government and industry will work together to strengthen further the UK supply chain.

The UK's Supply Chain Code of Practice (SCCoP) is currently supported by more than 200 companies spanning the spectrum of participants in the basin. The code outlines a set of best practice guidelines for the UKCS oil and gas industry to improve performance, eliminate unnecessary costs, add value and boost competitiveness. It broadly covers

three stages; plan, contract, perform and pay.

Fabrication has been identified as a specific sector which requires attention. While there are several UK fabrication yards that actively tender for substantial offshore projects, the majority of recent major fabrication projects have been awarded overseas to yards that are more cost competitive than those in the UK. Without compromising the competitiveness of projects in the UK, Government and industry both want to see UK businesses being given every opportunity to bid for all UKCS contracts.

A comprehensive overview of the UK supply chain's performance in terms of exports is not available. In the absence of this information, Scottish Enterprise data provides a useful reference point for underlying trends and activity. It records Scottish exports to over 100 different countries. The report quantifies that Scotland's international activity has risen from £1.8 billion in 2000 to £7.5 billion in 2010, of which £2.3 billion came from direct exports and £5.2 billion came from sales via overseas subsidiaries. The majority of sales were in services to USA, Canada, Angola, Norway and Australia⁷. UKTI is focussing on a number of other international high value opportunities, where there is the best fit with UK capability and appetite to engage with the UK supply chain, such as in Australia, Brazil, Iraq, Kazakhstan, Mexico, Libya and Saudi Arabia.

Goals:

The full capability of the UK oil and gas supply chain needs to be mapped to support strengths and address weaknesses.

This knowledge can then be used by UKTI to help UK supply chain businesses as they seek to internationalise. Alongside this, Government and industry will continue to share best practice with, and learn from, other countries' oil and gas industries in order to improve the effectiveness of developing the supply chain internationally. UK operators should be encouraged to champion the supply chain's technical capabilities abroad.

When compiling the list of approved bidders for UKCS contracts, full consideration will be afforded to UK based businesses deemed to have the necessary capability and capacity to execute the work.

As identified in the SWOT analysis, cost inflation is a threat to the long term future of the industry. Measures to control cost inflation should be addressed through collaboration within the industry in order to maintain cost competitiveness.

The BIS funded Advanced Manufacturing Supply Chain Initiative (AMSCI) is another route through which the sector might use public funds to help develop the supply chain.

The ultimate goal is to maintain a viable and globally competitive UK supply chain that not only serves the industry through to decommissioning, but is anchored in the UK.



Projects and responsibilities:

Action:	Target date:	Responsibility:
Map the UK supply chain, including exports, by value and destination, to determine areas of constraint and potential opportunities for additional support.	Q4 2013	Government and Industry
Provide support for UK businesses overseas through the UKTI's 'High Value Opportunities Programme' and through operators championing the UK supply chain overseas.	Ongoing	Government and Industry
Licence holders and major contractors to share selection criteria with Government prior to awarding a major contract.	Ongoing	Government and Industry
Commission work to address areas impacting on the competitiveness of UK fabricators.	Q4 2013	Government and Industry
Promote Oil and Gas Industry participation in the Government-funded Advanced Manufacturing Supply Chain Initiative (AMSCI).	Q3 2013	Government and Industry
Conduct a gap analysis of counterparts in other oil and gas producing countries and take forward best practices.	Q4 2013	Government and Industry
Extend the SCCoP to require that capable UK-based businesses are given full consideration when compiling the list of approved bidders.	Q4 2013	Government and Industry

6. PILOT

Aims Supported 1, 2, 3

Status:

PILOT is a well established partnership between Government and industry which aims to maximise the economic recovery of the UK's offshore resources of oil and gas.

DECC is taking forward work supporting the sector through PILOT. This includes Project Pathfinder which tracks emerging projects and developments from 95% of the UK operators and provides information on new field developments as well as decommissioning projects. The technology "demand-chain" allows operators to inform the supply chain of future challenges. A DECC survey of UK operators identified six areas to inform the innovation supply chain and help engender new research and future development plans: Seismic and Reservoir Characterisation, EOR / Production Optimisation, Asset Integrity, Life Extension and Decommissioning, Well Construction and Drilling, Subsea incl. Subsea Tie Backs and HSE/ including post Macondo technology development.

PILOT is chaired by the DECC Secretary of State and comprises representatives from the Scottish Government, the UK oil industry and the Scottish Trade Union Council.

Goals:

The industry looks to convert safely potential resources into production. The maintenance of critical 'hub' infrastructure will be as crucial in the years ahead as it is now. Without this infrastructure a large percentage of the UK's remaining hydrocarbon potential will not be realised.

In order to ensure that the productive life of the UKCS stretches out beyond 2050, the industry will need to work in a collaborative style, sharing costs and resources to ensure that the maximum benefit is attained. To this end, PILOT workgroups have engaged on the following objectives:

- Improving access to infrastructure;
- Increased oil recovery (IOR);
- Enhanced oil recovery (EOR);
- Improved technology uptake;
- Improved exploration success;
- Workforce resource issues.

Projects and responsibilities:

Action:	Target date:	Responsibility:
Improve access to infrastructure: - Receive report of findings - Implementation of agreed actions.	Q2 2013 Q4 2014	Government and Industry
Increase oil recovery: - Receive workgroup recommendations - Implementation of agreed actions.	Q2 2013 Q4 2014	Government and Industry
Enhance oil recovery: - Receive workgroup recommendations - Implementation of agreed actions - Review potential use for CCS CO ₂ in EOR.	Q2 2013 Q4 2014	Government and Industry
Improve technology uptake by holding a technology “Share Fair” event that links industrial demands with technology suppliers.	Q4 2013	Government and Industry
Improve exploration success - Receive recommendations from Exploration Taskforce - Implementation of agreed actions.	Q3 2013 Q4 2014	Government and Industry
Improving Workforce skills - Create a “one-stop-shop” information gateway to attract people into the industry - Broaden the number of modern apprenticeship disciplines available as part of the ‘Upstream Oil and Gas Technician Training Scheme’ apprenticeship scheme, - Form a partnership with the Military for people with relevant transferable skills.	Q4 2013	Government and Industry

7. Access to Finance

Aims Supported 1, 2, 3

Status:

There are a number of Government schemes, as well as action from the financial services sector, geared towards helping businesses grow. However, the issue of accessing finance is one shared by many companies in the oil and gas industry – and not just smaller members of the supply chain. Multi-national operators choose where to best allocate their capital internationally by ranking their portfolio and selecting the projects that deliver the best returns. The fiscal regime is an important component in these company decisions.

Some supply chain companies are required to post sizeable performance bonds after being awarded large contracts. This makes them financially weaker in spite of winning a contract; a potential barrier to that company's growth.

The 2008 financial downturn has made banks more risk averse to financing companies through debt. There are many financial instruments currently available to the oil and gas industry, but at present there is an incomplete understanding on the industry's side of how to access them.

The Government has recently announced that it is creating a 'Business Bank' to help tackle some of the deep-rooted structural barriers faced by small and mid-sized businesses and increase diversity in the business finance markets. New funding of £1 billion has been allocated to the Business Bank to leverage private sector investment and encourage the

development of private sector solutions. The bank will also bring together the strategy, management and communication of existing finance schemes for SMEs.

Goals:

The UK has very strong financial services and oil and gas sectors. The two should be working closely together to create growth. Within the oil and gas industry, there is an incomplete understanding of the products developed since 2010 to help growth. This includes the role of the newly established Business Bank. Both industries need to be made aware of each others' strengths.

Projects and responsibilities:

Action:	Target date:	Responsibility:
Raise awareness of the financial instruments available to the oil and gas industry through the organisation of a joint industry conference.	Q3 2013	Government and Industry
Government to engage with industry on the wide range of Government finance initiatives that are currently in place.	Q2 2013	Government and Industry
Help shape the role of the Government's Business Bank.	Q3 2013	Government and Industry
Review supply chain position in relation to 'performance bonds' and make appropriate recommendations.	Q4 2013	Government and Industry

8. Technology

Aims Supported 1, 2, 3

Status:

The development and implementation of new technology is of vital importance to maximising recovery from the challenging UKCS environment, yet overall R&D spend of the sector in the UK is reported to be 0.3% of sales⁸; far lower than Norway's proportion of 4%⁹.

In the recent past, new technology has helped the economics of sizeable investments. BP's £4.5 billion Clair Ridge project includes pioneering full-field injection of desalinated water to enhance oil recovery. Statoil's £4bn+ investment in Mariner, a heavy oil field, which was initially discovered in 1981, was made possible through innovative technological solutions.

The future of the UKCS is likely to see a higher number of smaller upstream companies, smaller opportunities, the need for higher recovery factors, an increased focus on asset integrity, tougher economics and more bespoke solutions rather than generic designs. As such there is a need to reduce cost and invest in technology to ensure the longevity of UKCS production over the coming decades.

The Industry Technology Facilitator (ITF), a not for profit organisation owned by 31 major global operators and service companies, stimulates joint industry innovation projects. ITF have in recent years widened their scope beyond the UKCS, but have given an assurance that they will maintain a strong

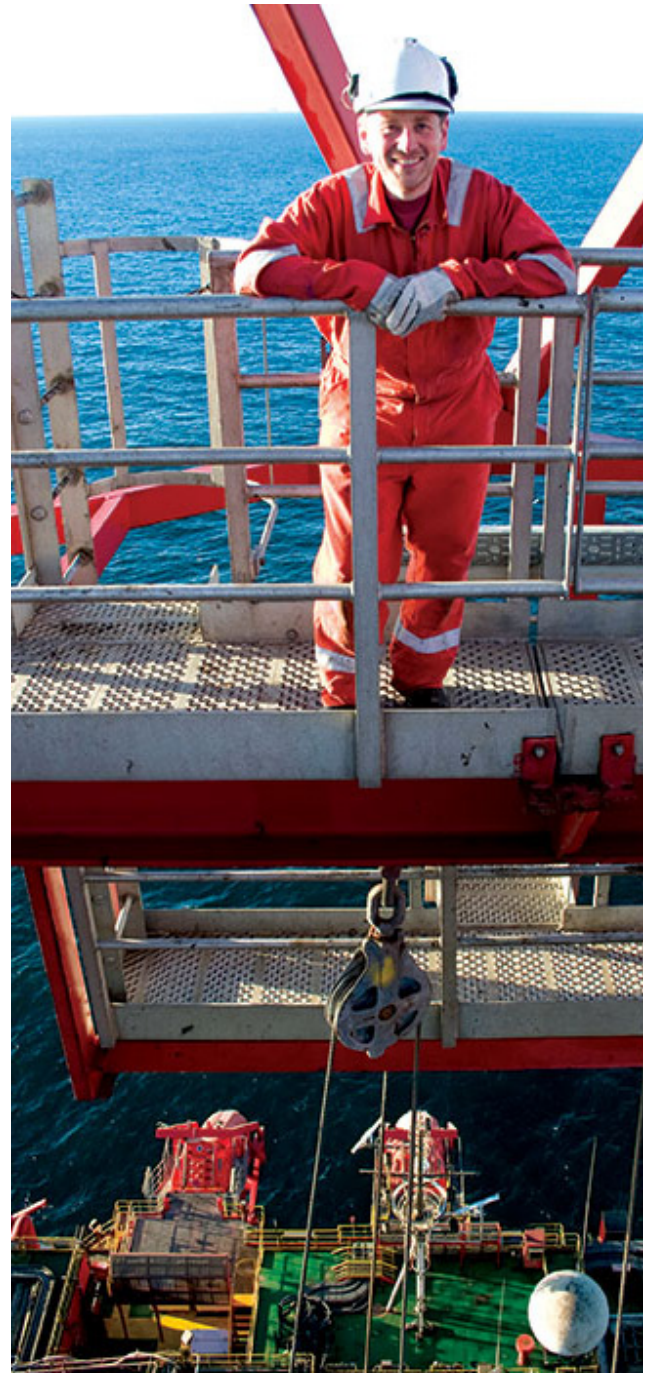


Image courtesy of Oil & Gas UK

UKCS based workstream. They will continue with their international activity providing potential export opportunities for the UK. ITF will continue to help identify and facilitate new technologies in support of this strategy – where necessary by undertaking ring-fenced UKCS activity.

Research Councils' investment in research, skills and technologies are used by the industry. The National Environmental Research Council's (NERC) British Geological Survey (BGS) carries out geological research. BGS hosts the National Geological Repository, which is well used by the oil and gas and carbon capture and storage (CCS) industries, and provides valuable skills and training. In the area of shale gas, BGS is developing techniques to estimate resources and identify drill sites. The reintroduction of oil and gas onto the Technology Strategy Board's programme should also be a catalyst for increased R&D spend by industry.

Goals:

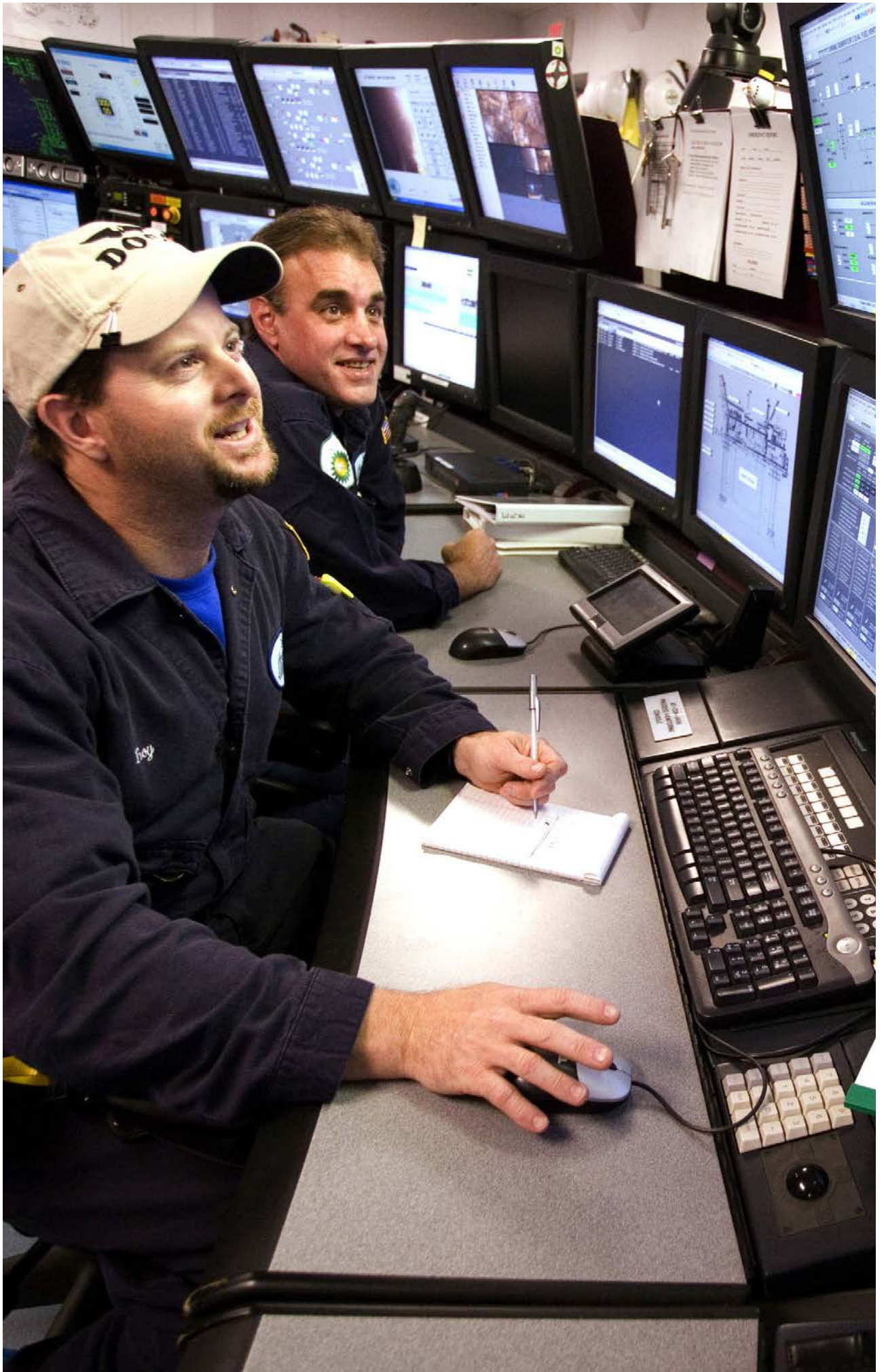
Develop and deliver a coherent UK technology strategy centred on specific geographical and technological target areas as defined by PILOT initiatives such as Southern North Sea, Central North Sea and Northern North Sea with relation to IOR/EOR, Infrastructure and Exploration will assist industry organisations in targeting efforts in developing more specific and focussed technologies, relevant to these focus areas.

Establish a national centre of excellence that will enable industry to better understand complex reservoirs, reduce drilling costs, improve offshore efficiency, enhance production and maintain the integrity of infrastructure.

Field recovery factors are an important aspect of the stewardship process. Whilst this data is currently reported to DECC, more could be made to share this data in a collaborative fashion in order to champion best practices among peer groups and drive up recovery rates.

The time taken to get new technologies from proof of concept to market penetration is said to be faster in Norway than in the UKCS. The UK oil and gas industry needs to accelerate technology implementation to be as fast as, or faster than, Norway. The UK also strives to be a world-leader in technology development.

Industry should be aware of Government work to ensure that the UK continues to lead global research in eight key areas: big data, space, robotics and autonomous systems, synthetic biology, regenerative medicine, agri-science, advanced materials and energy storage.



Projects and responsibilities:

Action:	Target date:	Responsibility:
Study the specific issue of how to speed up technology implementation and understand what best practices can be taken from Norway.	Q3 2013	Government and Industry
Develop and deliver a focussed technology strategy that anchors key “game changing” technology innovations as defined by the PILOT initiatives and specific geographical and technological target areas.	Q3 2013	Government and Industry
Establish more effective links between industry demand for new technology and the innovation community by holding an annual “technology share fair”.	Ongoing	Government and Industry
Reprioritise the ITF’s focus toward the UKCS.	Q4 2013	Government and Industry
More effective usage of stewardship data to increase recovery factors across fields that are underperforming relative to their peer group.	Ongoing	Government and Industry
Establish a national centre of excellence for technology.	Q1 2014	Industry

9. Skills

Aims Supported 1, 2, 3

Status:

The breadth of skills required to sustain the successful UK oil and gas industry covers everything from catering to law and accounting, through to seismic interpretation, drilling, geology and platform fabrication. This is in addition to offering some of the most exciting, challenging and lucrative engineering positions in the job market.

The industry is a source of employment for over 400 thousand workers³, of which 32 thousand are directly employed in the industry. High levels of activity and global competition have resulted in skills shortages; the availability of sufficient numbers of skilled workers is seen as one of the biggest challenges the industry faces. The supply/demand mismatch is impacting project schedules and driving up costs; a major threat to the overall competitiveness of the sector, as highlighted in the SWOT analysis. As education is a devolved issue, both UK and Scottish Governments will need to work with industry on these challenges.

Whilst the larger operator and supply chain companies have not encountered a shortage of apprentices or graduates applying to join them, smaller SMEs have not found this to be true and struggle with a shortage of high calibre candidates. With a number of businesses reporting that 30% of graduates joining them are women¹⁰, the industry is making some inroads into ensuring a future workforce that is talented and diverse.



Current demand for experienced engineers and geoscientists in the UK (and globally) outstrips supply. The industry expects it will require an additional 15 thousand staff over the next 4-5 years across a range of disciplines, including design engineers (all disciplines), subsea and drilling.

Many companies operate globally and deploy their resources on that basis. The impact of immigration legislation is therefore very important particularly given that industry expertise can be found outside the EU.

Goals:

The UK should compete effectively at a worldwide level for talent. In doing so, it will maintain the long term supply of quality personnel to all disciplines across the industry which are required to achieve the goals of increasing production and developing the supply chain domestically and internationally.

The sector is looking to recruit and train personnel from outside the sector (e.g. the military) to begin to address the identified pressure points.

The sector should be able to benefit from Government's overall push to give students sufficient access to each of the STEM subjects at school, as well as the drive to improve the image of engineering, following the advice from the Chief Scientific Advisor, Professor John Perkins, in late 2012. The "See Inside Manufacturing" programme can also help the industry as it seeks to provide opportunities for young people, as

well as their teachers and career advisors, to 'get behind the scenes', visit modern manufacturing operations and discover for themselves the career opportunities that exist in manufacturing.

Over the coming years, the number of University places in engineering and physical sciences subject will need to keep pace to satisfy labour market and student demand.

In the future, a strong energy industry that has developed from the oil and gas industry may be able to provide the skills and capability to support the development of the renewables sector.

Projects and responsibilities:

Action:	Target date:	Responsibility:
Collect data on the industry skills shortage and perform skills gap analysis.	Q4 2013	Government and Industry
Establish a national programme to retrain ex-military personnel and from other industries with the relevant transferable skills to enable them to be redeployed in the oil and gas industry.	Q3 2013	Government and Industry
Map the work being done by BIS to address STEM uptake issues.	Q2 2013	Government and Industry
Industry to decide whether it is to become an active participant in the 'See Inside Manufacturing' programme.	Q2 2013	Government and Industry
Encourage gender diversity in the industry by encouraging women to take up STEM subjects, including a specific event at Offshore Europe to attract women to the sector.	Q3 2013	Government and Industry
Government and Industry to work within the academic environment to stimulate student demand for engineering careers.	Ongoing	Government and Industry

10. Awareness of the Industry

Aims Supported 2, 3



Status:

Oil and gas currently plays a major role in the UK's energy mix – UK homes are heated by gas, cars are fuelled by petrol/diesel and a sizeable percentage of electricity is generated by burning gas. Currently, hydrocarbons represent 75% of the UK's primary energy source¹¹, and even as we reduce the UK's carbon footprint, hydrocarbons will remain a vital part of our energy system for years to come.

However, amongst the general public, the oil and gas industry is currently perceived as a “sunset industry” which makes a diminishing contribution to the UK economy. It is incorrectly perceived that the industry faces an unsustainable future and that it is coming to the end of its life. If this perception persists, talented individuals might overlook the industry; compounding the skills shortage.

According to Oil & Gas UK's Activity Survey, the reality is that the UK will continue to supply oil and gas well beyond 2055. On the long term demand side, even if the International Agency's “New Policies Scenario” is met, global demand for oil and gas is forecast to increase by 28% between now and 2035.²¹

The industry also suffers from the perception that a strong domestic oil and gas industry deflects progress towards a greener UK economy. Government has made it clear that gas is to be an essential part of the energy mix.

Goals:

Getting more people to know about the industry and the contribution it makes to the nation's prosperity should ensure an objective debate about the UK's energy future and could help bring in the best talent to the industry. Going forward, industry and Government need to be more visible and confident in championing the industry's achievements.

Projects and responsibilities:

Action:	Target date:	Responsibility:
A pilot project will soon be underway to improve awareness and understanding of the contribution that the industry makes to Britain today.	Q2 2013	Industry
Government to consider its role in improving the public's perception of the UK oil and gas industry.	Q2 2013	Government and Industry

11. Engaging with Other Industries

Aims Supported 2, 3

Status:

This strategy is focussed on the UK upstream oil and gas industry. However, the broad oil and gas sector's influence is felt throughout the UK economy. The linkages are particularly apparent with other parts of the energy sector. The oil and gas industry has the skills, knowledge and expertise to develop its products and services as other industries evolve; especially for offshore renewables, shale gas and carbon capture. There is also an opportunity for the oil and gas industry to learn from other advanced engineering industries.

With over 40 years experience in overcoming challenges of the North Sea, there are many valuable transferrable skills and technologies which can help bring forward offshore renewable projects. In particular there are already a number of companies with their roots in the oil and gas industry starting to diversify into the offshore renewables market. This is evident in the Subsea sector with companies establishing a renewables division and looking at opportunities to widen the scope of their offering.

Offshore renewables can also build upon the experience of the oil and gas sector in developing more efficient supply chains, which are globally competitive and in doing so generate greater economic benefit to the UK. The stringent safety standards which have been developed for the UKCS are transferable, and are being adopted in the developing offshore renewables sector.

Indeed there are a number of cross energy sector training courses being run. We wish to encourage and support this cross-fertilisation across those different energy sectors.

It is expected the forthcoming Renewables industrial strategy will cover these synergies in greater depth .

The overall potential of domestic shale gas is still being uncovered. Key uncertainties remain about how much of UK shale gas is technically recoverable, and whether or not the development of these resources is economically feasible. Following the removal of the government's suspension of hydraulic fracturing, further exploration and appraisal of these resources is set to continue, subject to various extra safeguards. An extensive exploration phase is needed before any shale gas production can begin. The Oil and Gas Industry Council will continue to monitor the situation in line with this strategy's aims.

The use of the UK's depleted oil and gas fields for the permanent storage of CO₂ as part of CCS is a potentially significant opportunity. If all offshore fields currently in production were used in CCS, together with saline aquifers, this could provide sufficient storage for more than 100 years of UK industrial emissions. Injecting sequestered CO₂ into reservoirs could have a significant impact on enhanced oil recovery. Whilst this technology has not yet been deployed commercially offshore, such a technology is estimated to have the potential to recover more than 3 billion barrels from ageing UKCS fields¹².

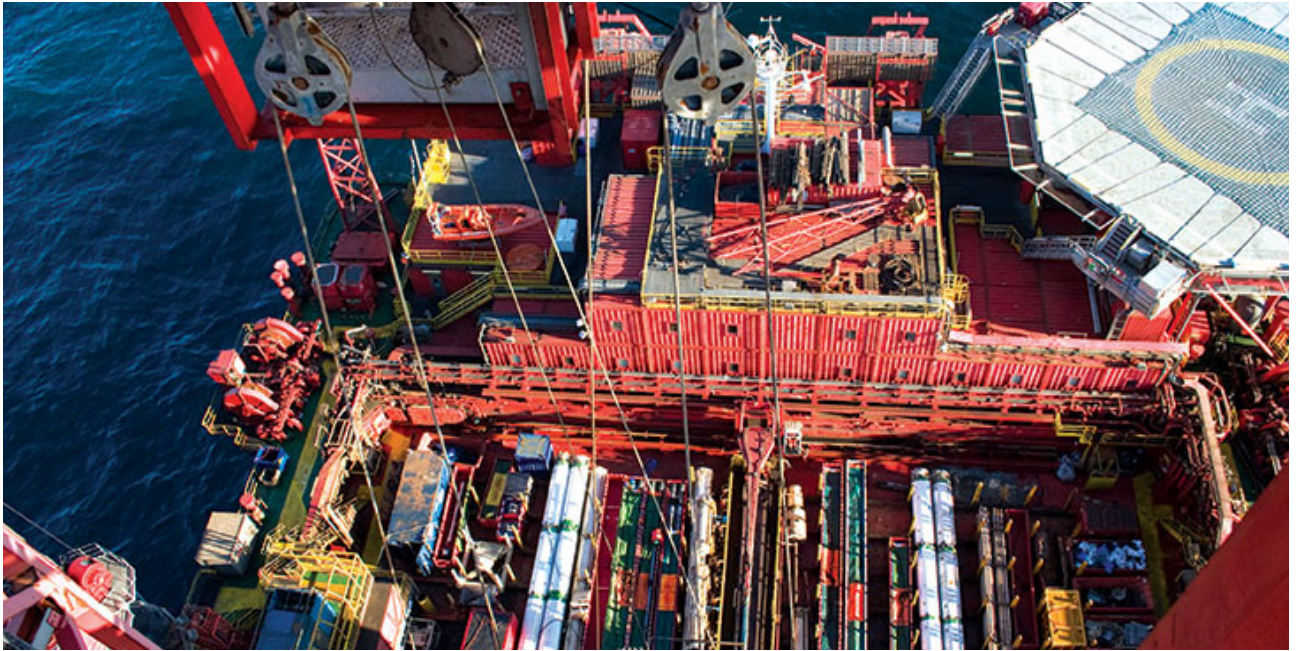


Image courtesy of Oil & Gas UK

Production from the UKCS is an important feedstock for the UK's downstream industry; with 21% of UK refinery crude throughput coming from the UKCS. The UK's seven main oil refineries processed almost 75 million tonnes of crude oil and produced over 76 million tonnes of refined products in 2011, supporting the employment of an estimated 150 thousand people¹³. Each of these seven refineries is typically estimated to benefit the Exchequer by approximately £60 million per year through spending on salaries, business rates and other services. DECC is leading a review on these challenges, including the role of imports, with a view to reporting in late 2013.

Goals:

Ensure an open dialogue in the areas of skills, knowledge and technology transfer that allows the industry to benefit from insights from other industries.

To see a step change in the technology and cost of CCS so that it can be deployed to help the UK and OECD reach decarbonisation targets for electricity generation.

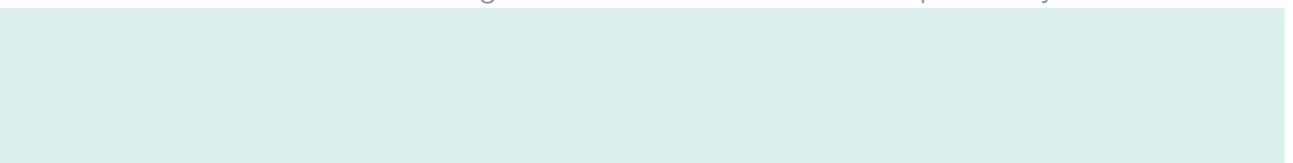
For offshore renewable, areas of compatibility might include the installation, operation and maintenance of subsea equipment in challenging environments. The common themes include environmental impact, asset integrity and seabed monitoring. Oil and gas expertise which could have a read across are remote structural health and conditional monitoring, ICT usage, inspection equipment and the use of advanced materials.

Projects and responsibilities:

Action:

Target date:

Responsibility:



Establish a forum to promote greater awareness of opportunities between the offshore wind and oil and gas industries.

Q3 2013

Government

12. Decommissioning

Aims Supported 1, 2, 3

Status:

With around 470 installations, 10 thousand kilometres of pipelines and approximately 5 thousand wells to plug and abandon, decommissioning represents a new and exciting business opportunity for British companies¹⁴. Given the age of the UKCS, this is a sector in which the UK can gain first mover advantage, as already experienced with nuclear decommissioning.

Industry and Government partnership has already made great strides to consider the full scope of this work and how to tackle it efficiently and safely.

Goals:

Decommission safely, cost effectively and with regard to the environment, at the right time and with the right scope. It must also be recognised that safely extending the field lives of critical “hub” infrastructure, as described by PILOT’s Infrastructure workgroup, will help the viability of nearby exploration and small field developments.

Projects and responsibilities:

Action:	Target date:	Responsibility:
Develop technical, commercial and regulatory proposals to bring about cost efficiencies in decommissioning activities.	Q4 2013	Government and Industry
Develop best practices on making an efficient transition from cessation of production to decommissioning.	Q4 2013	Government and Industry

13. Fiscal Regime

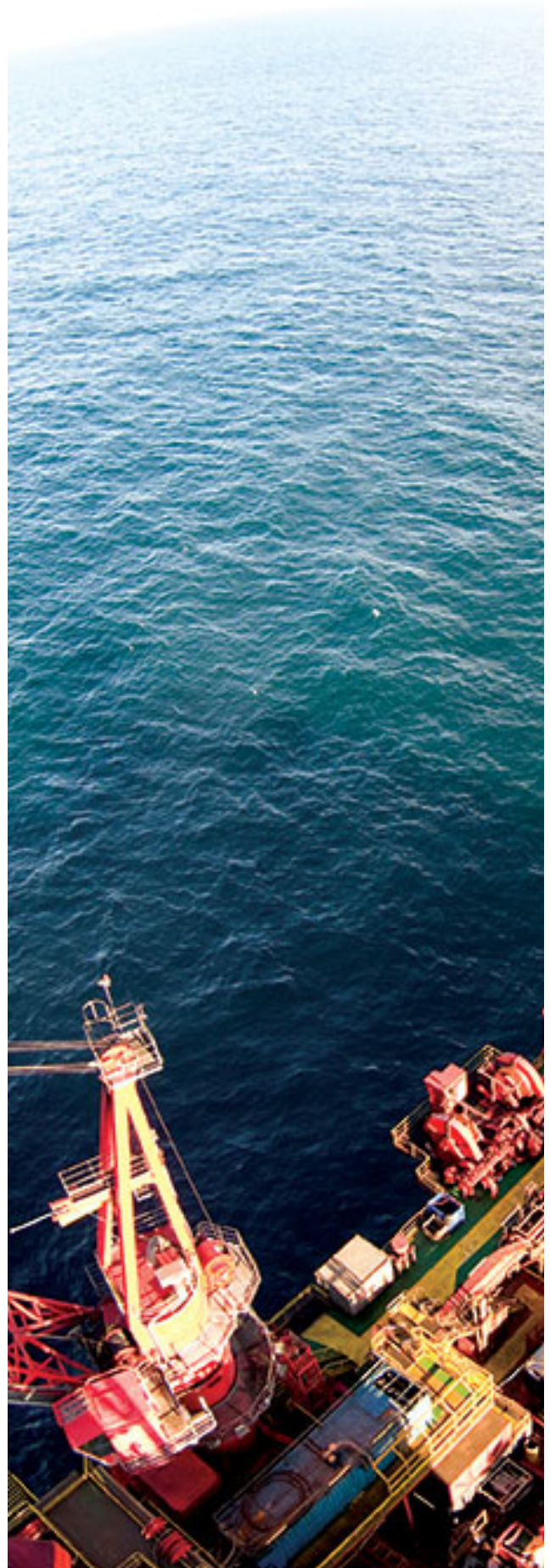
Aims Supported 1, 2, 3

Status:

Through the establishment of the joint HMT/ Industry Fiscal Forum and through the recent extensions to the field allowance regime, the Government has demonstrated it is committed to a fiscal regime that encourages investment and innovation in the UKCS, whilst ensuring a fair return for taxpayers. The Industry Council will support the discussion of the Fiscal Forum as needed.

Over the past two years, the Government has worked closely with industry to develop a package of measures designed to maximise the economic production of the UKCS. These include several new or enhanced field allowances and giving the industry long-term certainty on decommissioning tax relief. Industry has warmly welcomed these measures and the establishment of the Oil and Gas Fiscal Forum. Against this background, investment in new and existing fields was a record £11.5 billion in 2012 and is forecast to reach as much as £14 billion in 2013. This will ensure that we make the most of the UKCS in the long term.

A number of major asset trades have been seen recently several of which have been predicated on the expectation of greater certainty on decommissioning relief. The changes to field allowances for new fields, together with the increase in the rate of the Ring Fence Expenditure Supplement from 6 to 10 per cent with effect from January 2012 which was announced in July 2011, have seen a number of major developments



proceed, including the Mariner heavy oil field and the Cygnus dry gas field. Since introducing the brownfield allowance, uptake has been strong. Significant field life extension has been realised, including the redevelopments of Montrose/Arbroath and Thistle.

Goals:

Ensure that the basin maintains the right fiscal environment to be an attractive and competitive proposition for investors, thereby maintaining integrity standards and maximising recovery over the coming decades. Determining the ‘right’ fiscal regime will involve collaborative work and studies conducted through the Fiscal Forum.

Delivery of a Decommissioning Relief Deed to give businesses certainty over the tax relief they will receive when decommissioning their assets. This will lead to increased asset trades and investment.

Projects and responsibilities:

Action:	Target date:	Responsibility:
Maintain an open dialogue and engage in collaborative studies through the Fiscal Forum.	Ongoing; (3 meetings p.a.)	Government and Industry
Give industry certainty on the future treatment of decommissioning tax relief.	Following Finance Act in 2013	Government
Ensure increased certainty leads to move to use of post-tax security in decommissioning security arrangements.	2013/14	Industry

Annex A: Aggregation of projects and responsibilities

Action:	Target date:	Responsibility:
Transpose EU Safety Directive into UK law.	June 2015	Government and Industry
Implement all programmes and initiatives agreed under Step Change in Safety.	Ongoing	Step Change in Safety
Map the UK supply chain, including exports, by value and destination, to determine areas of constraint and potential opportunities for additional support.	Q4 2013	Government and Industry
Provide support for UK businesses overseas through the UKTI's 'High Value Opportunities Programme' and through operators championing the UK supply chain overseas.	Ongoing	Government and Industry
Licence holders and major contractors to share selection criteria with Government prior to awarding a major contract.	Ongoing	Government and Industry
Commission work to address areas impacting on the competitiveness of UK fabricators.	Q4 2013	Government and Industry
Promote Oil and Gas Industry participation in the Government-funded Advanced Manufacturing Supply Chain Initiative (AMSCI).	Q3 2013	Government and Industry

Action:	Target date:	Responsibility:
Conduct a gap analysis of counterparts in other oil and gas producing countries and take forward best practices.	Q4 2013	Government and Industry
Extend the SCCoP to require that capable UK-based businesses are given full consideration when compiling the list of approved bidders.	Q4 2013	Government and Industry
Improve access to infrastructure:		Government and Industry
- Receive report of findings	Q2 2013	
- Implementation of agreed actions.	Q4 2014	
Increase oil recovery:		Government and Industry
- Receive workgroup recommendations	Q2 2013	
- Implementation of agreed actions.	Q4 2014	
Enhance oil recovery:		Government and Industry
- Receive workgroup recommendations	Q2 2013	
- Implementation of agreed actions	Q4 2014	
- Review potential use for CCS CO ₂ in EOR.		
Improve technology uptake by holding a technology "Share Fair" event that links industrial demands with technology suppliers.	Q4 2013	Government and Industry

Action:	Target date:	Responsibility:
Improve exploration success - Receive recommendations from Exploration Taskforce - Implementation of agreed actions.	Q3 2013 Q4 2014	Government and Industry
Improving Workforce skills - Create a “one-stop-shop” information gateway to attract people into the industry - Broaden the number of modern apprenticeship disciplines available as part of the ‘Upstream Oil and Gas Technician Training Scheme’ apprenticeship scheme, - Form a partnership with the Military for people with relevant transferable skills.	Q4 2013	Government and Industry
Raise awareness of the financial instruments available to the oil and gas industry through the organisation of a joint industry conference.	Q3 2013	Government and Industry
Government to engage with industry on the wide range of Government finance initiatives that are currently in place.	Q2 2013	Government and Industry
Help shape the role of the Government’s Business Bank.	Q3 2013	Industry
Review supply chain position in relation to ‘performance bonds’ and make appropriate recommendations.	Q4 2013	Government and Industry

Action:	Target date:	Responsibility:
Study the specific issue of how to speed up technology implementation and understand what best practices can be taken from Norway.	Q3 2013	Government and Industry
Develop and deliver a focussed technology strategy that anchors key “game changing” technology innovations as defined by the PILOT initiatives and specific geographical and technological target areas.	Q3 2013	Government and Industry
Establish more effective links between industry demand for new technology and the innovation community by holding an annual “technology share fair”.	Ongoing	Government and Industry
Reprioritise the ITF’s focus toward the UKCS.	Q4 2013	Government and Industry
More effective usage of stewardship data to increase recovery factors across fields that are underperforming relative to their peer group.	Ongoing	Government and Industry
Establish a national centre of excellence for technology.	Q1 2014	Industry
Collect data on the industry skills shortage and perform skills gap analysis.	Q4 2013	Government and Industry

Action:	Target date:	Responsibility:
Establish a national programme to retrain ex-military personnel and from other industries with the relevant transferable skills to enable them to be redeployed in the oil and gas industry.	Q3 2013	Government and Industry
Map the work being done by BIS to address STEM uptake issues.	Q2 2013	Government and Industry
Industry to decide whether it is to become an active participant in the 'See Inside Manufacturing' programme.	Q2 2013	Government and Industry
Encourage gender diversity in the industry by encouraging women to take up STEM subjects, including a specific event at Offshore Europe to attract women to the sector.	Q3 2013	Government and Industry
Government and Industry to work within the academic environment to stimulate student demand for engineering careers.	Ongoing	Government and Industry
A pilot project will soon be underway to improve awareness and understanding of the contribution that the industry makes to Britain today.	Q2 2013	Industry

Action:	Target date:	Responsibility:
Government to consider its role in improving the public's perception of the UK oil and gas industry.	Q2 2013	Government and Industry
Maintain an open dialogue with the offshore renewable sector to identify areas of shared interest and learning.	Q4 2013	Government and industry
Develop technical, commercial and regulatory proposals to bring about cost efficiencies in decommissioning activities.	Q4 2013	Government and Industry
Develop best practices on making an efficient transition from cessation of production to decommissioning.	Q4 2013	Government and Industry
Maintain an open dialogue and engage in collaborative studies through the Fiscal Forum.	Ongoing; (3 meetings p.a.)	Government (HM Treasury) and Industry
Give industry certainty on the future treatment of decommissioning tax relief.	Following Finance Act in 2013	Government
Ensure increased certainty leads to move to use of post-tax security in decommissioning security arrangements.	2013/14	Industry
Establish a forum to promote greater awareness of opportunities between the offshore wind and oil and gas industries.	Q3 2013	Government

Annex B: SWOT Analysis of the oil and gas industry

The industry is UK-wide with key clusters in Aberdeen, London and the north east and east of England.

Whilst most of the gross value added (GVA) is concentrated in the operators' extraction of oil and gas, the supply chain services are an integral part of the industry's success: operators in the UKCS are dependent upon the vibrancy of the domestic supply chain and vice versa. As shown in the diagram, the UK supply chain is deep, varied and activity is linked to all parts of a field's life cycle.



Source: FPAL

Figure 1: The oil and gas supply chain is widespread across the UK

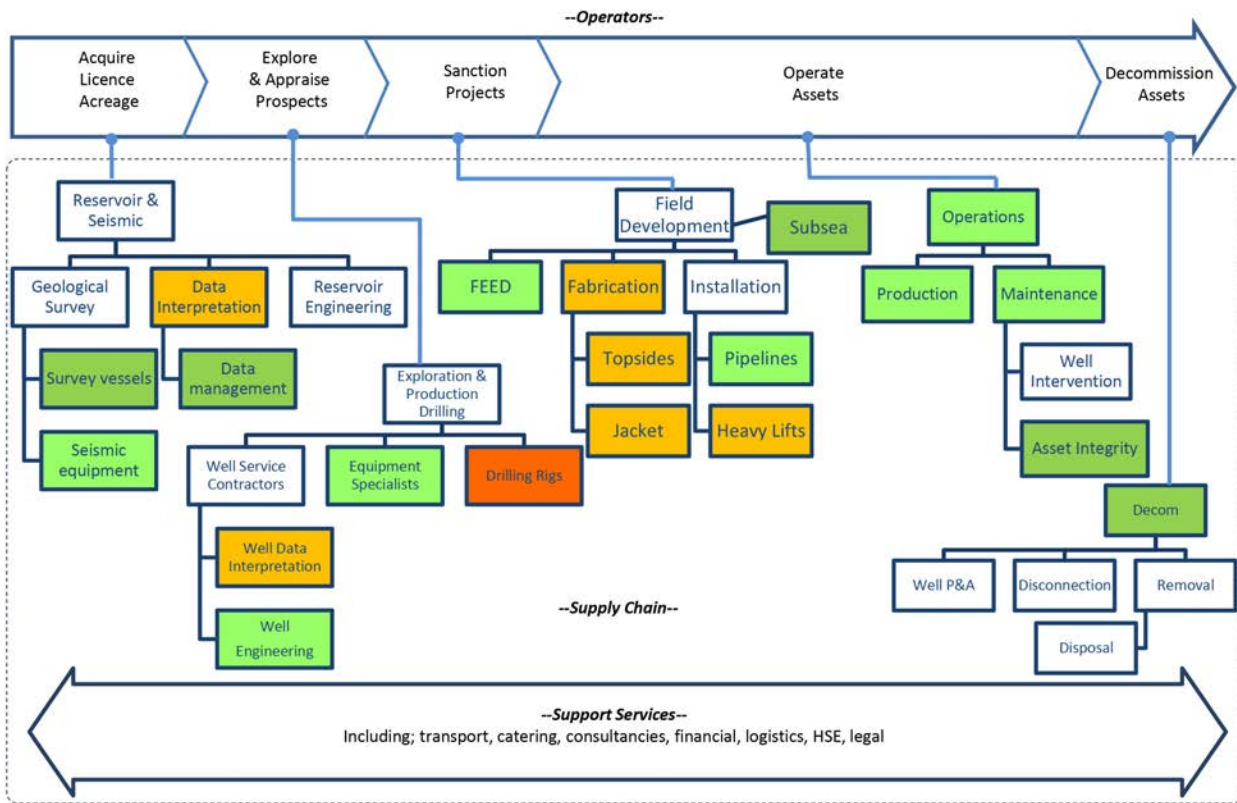


Figure 2: Overview of the relationship between UK supply chain and operator activities

Figure 2 also gives some indication as to the relative strengths (green) and weaknesses (amber) of the UK supply chain. The white boxes suggest the area to be neither a strength nor a weakness. Due to a lack of available data, strengths were determined as areas where the UK has critical mass and world-leading capability. Similarly, areas of weakness were defined as having a relatively low proportion of UK businesses and where work for UKCS fields tends to be awarded to non-UK headquartered companies.

Robust data on exports from the UK supply chain and on the proportion of UK supply chain content in UKCS projects are needed to make better informed policy to assist the UK oil and gas supply chain going forward. The findings will be reviewed annually by the Oil and Gas Industry Council.

This section outlines the general strengths and weaknesses of the UK oil and gas industry's supply chain, identifying some of the opportunities and threats facing it.

Strengths

The UK's oil and gas supply chain has been over 40 years in the making. Throughout its evolution, the UK supply chain has demonstrated an aptitude for technical,

operational, commercial and contractual innovation and as a result, is well positioned across the value chain. The supply chain achieved revenues of £27 billion in 2011³ and is internationally recognised as a centre of excellence in project management, major contracting, design engineering, asset and operational management, design and manufacturing of advanced equipment, research and development, training and education and professional and financial services.

Specifically, the UK is acknowledged as having significant strengths in the following areas:

- Safety;
- Subsea engineering;
- High pressure, high temperature (HPHT) field developments;
- Oil and gas process machinery, equipment and technology;
- Deep water oil and gas developments;
- Integrated services for the operation and maintenance of fields;
- Late life operation of mature fields;

- Training and education;
- Legal, financial and insurance services.

Weaknesses

High cost base

Revenues in the oil field services have increased year-on-year since 2008 but profits have not always mirrored this trend. One potential explanation is the rise in costs in the industry¹⁵; the oil and gas industry has the highest average cost per employee across the industrial sectors.

This high cost base is starting to be felt in the supply chain, particularly in the heavy fabrication subsector where many recent capitally intensive projects have been awarded overseas instead of to UK yards. The main reason cited in one-one meetings was cost competitiveness.

Industry collaboration

High activity levels can lead to an ‘overheating’ of the UK supply chain and increased demand for cost-competitive options overseas. Collaboration would work to smooth out demand and supply.

Technology implementation

It is suggested that there is a “race to be second” in terms of technology implementation in the UKCS, with end users wanting to implement technology with a proven benefit, but not wanting to be the first to trial a new technology in situ. Anecdotal evidence from discussions with the industry has suggested that some SMEs go out of business before their product is trialled.

Aberdeen

While the strengths of the sector are UK wide, Aberdeen has established itself as a global hub for oil and gas expertise. This has happened in spite of, not because of, its infrastructure. From a small airport through to traffic congestion and limited housing stock,

Aberdeen has struggled to keep up with the demands of the thriving oil and gas sector.

Aberdeen City Council is fully aware of these issues and keen to tackle them with industry. Previous investments in industry parks and support for new build facilities have helped give Aberdeen an enviable employment record. The City Council is now taking forward work on the western peripheral route which will ease congestion. The new harbour in Nigg Bay will be of particular value to the sector. The airport is up for sale, following the Competition Authority’s BAA ruling. New owners will be encouraged to invest in its facilities to make it a true international airport.

Aberdeen City Council is in discussions with Infrastructure UK regarding the use of an UK guarantee to help raise finance for infrastructure investment.

Opportunities for the UK supply chain

i) Domestic

There is a large enough resource base to feed supply chain field development and operations to well beyond 2050: over 41 billion barrels of oil equivalent have been recovered from the UK, but a further recovery of 15-24 billion barrels could be achieved with further new investment.⁴

High interest in licensing rounds

Following high levels of interest in successive UK offshore licensing rounds, the number of firm commitments for shooting, processing and interpreting seismic on the UKCS over the next four years is high, especially for 3D seismic. Improvements in mapping and technology could increase recovery. This increase in demand is due in part to the extension of the Small Field Allowance (SFA), which improved the expected monetary value of exploration drilling in mature regions of the UKCS, making drilling more attractive now compared to after Budget 2011.



Image courtesy of Chevron North Sea Limited

New investment

New technology and changes to the fiscal code have helped lead to recent, sizeable investments in large projects such as BP's £4.5 billion Clair Ridge project and Statoil's £4bn+ investment in the heavy oil Mariner field. These are the largest investments in the UKCS for more than a decade. Field allowances in the west of Shetland region have led to the development of fields in this area; opening up the frontier for smaller developments in the region in future. The SFA continues to help the development of many other smaller developments.

Existing fields

Approximately 50% of fixed offshore platforms are now operating beyond their original design life¹⁶, with older facilities needing increased amounts of maintenance related activity. The Macondo incident has also led to an increase in asset integrity activity. The introduction of a brown-field allowance and work on securing decommissioning liabilities will both lead to extensions in field life, through increased brown-field work and asset trades, and will also result in increased asset maintenance work.

Technology

Significant implementation of increased oil recovery (IOR) and enhanced oil recovery (EOR) techniques and technologies could improve production within the UKCS by up to 4% over the next 35 years¹⁷. Future opportunities to deliver advances in technology

will come in part from fostering stronger links between the needs of the industry with academia and commercial innovators.

Future sectors

Decommissioning will become a significant part of the oil field service value chain, if operators and the supply chain collaborate to minimise bottlenecks of activity. In future, other sectors could come into focus; carbon capture and storage opportunities could use oil and gas industry transport expertise and storage infrastructure. Shale gas in the UK could draw on the well service contractor community in Aberdeen. Offshore wind and marine energy offer significant potential opportunities for the UK oil and gas offshore and supply chain experience and expertise. In particular the subsea sector which is already straddling both sectors and also in relation to health and safety and training.

The forthcoming Offshore Wind Industrial Strategy will explore these areas in greater depth.

ii) International

The major oil and gas firms are finding larger and more profitable fields in emerging regions elsewhere – this is an opportunity for UK supply chain companies who have proven products and services as well as established relationships with those exploring overseas fields. Supply chain companies indicated they were most likely to enter a new market if they were specifically introduced by a previous business partner.

Threats to the UK supply chain

Anything that threatens the willingness of operators to do business in the UK will indirectly threaten the supply chain.

Declining production

The UKCS reached its peak in terms of oil and gas production in 1999. Production in recent years is currently less than 50% of its historic peak¹⁸. Any increases in UK production ought to be seen against a baseline of long term decline. Indeed, production issues in the North Sea were touted as the principal factor behind the UK's negative GDP growth in Q4 2012. Production is the lifeblood of the oil field service sector and current decline rates need to be arrested. The challenge is to boost current levels of production by working on increased recovery techniques, asset integrity and successful well interventions; developing this short-term threat into a longer term opportunity for the supply chain.

Declining exploration drilling and success rates

Although the number of exploration wells started in 2012 represented a 40% increase on 2011, the year with the fewest wells drilled since 1965¹⁹, only two small discoveries were made; leaving exploration success rates at an all-time low. Supply chain companies with a main focus in exploration and drilling services may have their skills and services drawn outside of the UK to other, more prospective areas. One operator, Tullow Oil, recently

exited the UK citing better exploration prospects elsewhere.

Accessing finance

Currently smaller supply chain companies competing for large contracts are asked to post a security bond to protect the operator or primary contractor from project overruns or low quality product. This is reported as a barrier to growth for some UK supply chain companies.

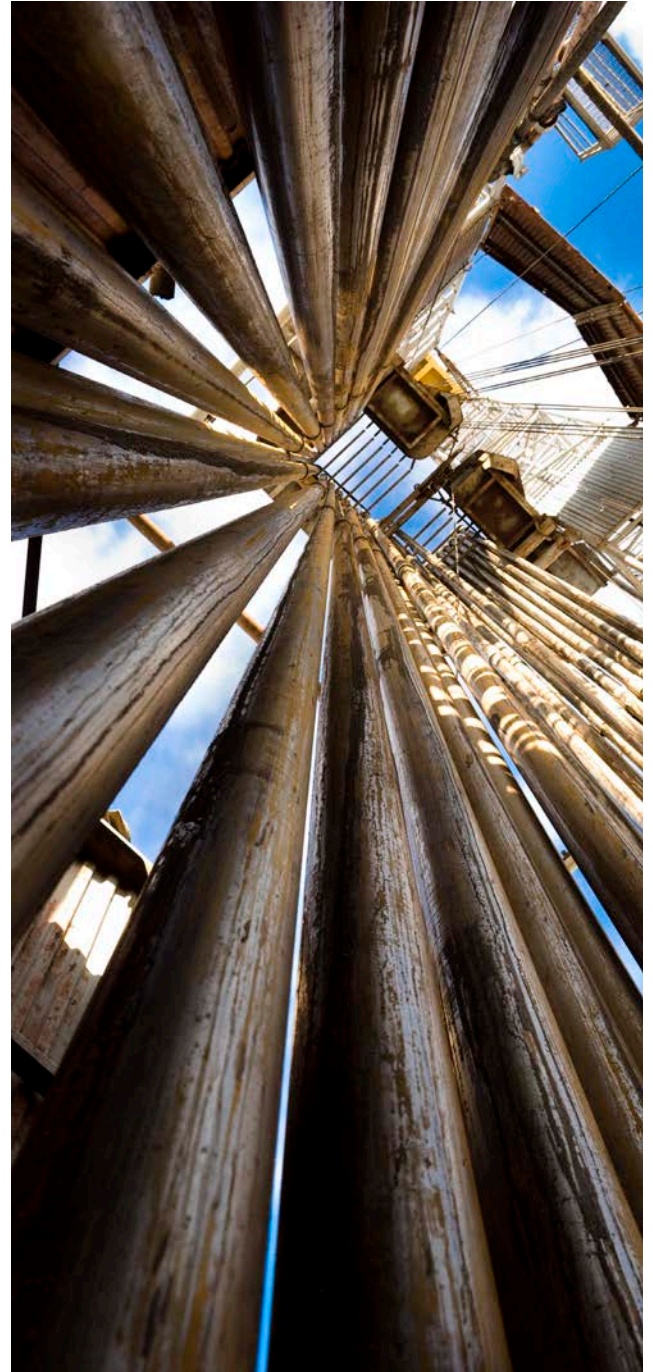
Ageing workforce demographics and its implications for skills

Despite a tight UK oil and gas labour market where the majority of the industry's workforce are older than the UK average, and a UK labour market where spare capacity is estimated at over 3%²⁰, companies have tended to bid up the price of labour currently available instead of investing the time in fully training a new entry level employee. This short term approach to tackling the issue increases the costs of operating in the UKCS. Anecdotal evidence suggests that widespread use of subcontracting and limited company status is exacerbating these impacts.

The lack of specialised engineers has been recognised by the Migration Advisory Committee in its most recent report on shortages in some professions. This view has been reinforced by reports from industry bodies such as OPITO that suggest experienced engineering posts are the most difficult to fill.

Outlook

If industry and Government are successful in maximising the domestic opportunities and minimising the threats listed here, there would be a measurable impact on UK oil and gas output which would be of tangible benefit to UK GDP, employment and taxes.



ANNEX C: The Oil and Gas Industry Council

Purpose:

The Oil and Gas Industry Council provides a forum where current and arising issues for the oil and gas supply chain can be discussed with BIS/DECC and to advise the UK Government on the development and delivery of a sector specific strategy for oil and gas as part of the UK's Industrial Strategy. If there is a specific topic of relevance on the agenda the Chairman may agree to the inclusion of additional representatives to attend the meeting

Chairman: Gordon Ballard, Chairman and Country Manager, Schlumberger

John Pearson, Managing Director, Natural Resources Europe and West Africa, AMEC

Patrick Phelan, Managing Director, Aquaterra Energy

Neil Kirkbride, Managing Director, BEL Valves

Nigel Lees, Operations Director, BIS Salamis

Rod Christie, President of GE Energy for Central & Eastern Europe, Russia and CIS, GE Energy

Jack Winton, Senior Vice President, Operations, KCA Deutag

Steve Nicol, Chief Executive Officer, Red Spider Technology

Trevor Garlick, Regional President, BP

James Edens, Vice President & Managing Director, CNR International UK Limited

Nigel Hares, Chief Operating Officer, EnQuest

Nigel Wilson, Regional Business Unit Manager, Premier Oil

Glen Cayley, Vice President - Technical, Shell Upstream International Europe

Morten Ruud, Executive Vice President for Projects, Statoil

Malcolm Webb, Chief Executive, Oil & Gas UK

Stephen Marcos Jones, Business Development Director, Oil & Gas UK.

ANNEX D: Key Website Addresses

BIS: The Department for Business, Innovation & Skills (BIS) is the department for economic growth. The department invests in skills and education to promote trade, boost innovation and help people to start and grow a business. BIS also protects consumers and reduces the impact of regulation.

<https://www.gov.uk/government/organisations/department-for-business-innovation-skills>

UKTI: UK Trade & Investment (UKTI) works with UK-based businesses to ensure their success in international markets, and encourage the best overseas companies to look to the UK as their global partner of choice.

<http://www.ukti.gov.uk/home.html>

DECC: The Department of Energy & Climate Change (DECC) works to make sure the UK has secure, clean, affordable energy supplies and promote international action to mitigate climate change.

<https://www.gov.uk/government/organisations/department-of-energy-climate-change>

Project Pathfinder: <https://www.gov.uk/oil-and-gas-project-pathfinder>

HMT: Her Majesty's Treasury (commonly known as HM Treasury) is the United Kingdom's economics and finance ministry.

<http://www.hm-treasury.gov.uk/>

Enterprise Zones: Enterprise Zones are areas around the country that support both new and expanding businesses by offering incentives.

<http://enterprisezones.communities.gov.uk/>

Natural Environment Research Council: NERC is the UK's main agency for funding and managing research, training and knowledge exchange in the environmental sciences.

<http://www.nerc.ac.uk/>

Research Councils UK: RCUK are responsible for investing public money in research in the UK to advance knowledge and generate new ideas which lead to a productive economy, healthy society and contribute to a sustainable world.

<http://www.rcuk.ac.uk/Pages/Home.aspx>

Technology Strategy Board (TSB): The TSB's role is to stimulate technology-enabled innovation in the areas which offer the greatest scope for boosting UK growth and productivity. It also advises Government on how to remove barriers to innovation and accelerate the exploitation of new technologies.

<http://www.innovateuk.org/>

Scottish Council for Development and Industry: The SCDI is an independent membership network, which strengthens Scotland's competitiveness by influencing Government policies to encourage sustainable economic prosperity. It is a broad-based economic development organisation, with membership drawn from Scottish business, trades unions, public agencies, educational institutions, local authorities, and the voluntary sector.

<http://www.scdi.org.uk/>

Scottish Enterprise: Identify and exploit the opportunities for economic growth by supporting Scottish companies to compete, helping to build globally competitive sectors, attracting new investment and creating a world-class business environment.

<http://www.scottish-enterprise.com/>

Scottish Government Oil and Gas Strategy:

<http://www.scottish-enterprise.com/~media/SE/Resources/Documents/MNO/Oil-and-Gas-strategy-2012-2020.pdf>

Aberdeen City Council:

<http://www.aberdeencity.gov.uk/home/home.asp>

Association of British Independent Oil Exploration Companies (BRINDEX): The Association of British Independent Oil Exploration Companies (BRINDEX) seeks to promote the role played by British independent exploration and production (E&P) companies in maintaining a powerful and effective UK based oil and gas industry. By increasing awareness of the independents' achievements in developing oil and gas reserves on the UK Continental Shelf (UKCS), and increasingly elsewhere in the world, we aim to demonstrate our vital contribution to both the industry and the local economy.

<http://www.brindex.co.uk/>

British Chemical Engineering Contractors Association (BCECA): BCECA is the trade association representing the principal companies in the UK that provide engineering, procurement, construction and project management services to the process industries.

<http://bceca.co.uk/>

British Rig Owners Association (BROA): Since it was established in 1982, BROA has been dedicated to promoting technical discussion between the owners and operators of mobile offshore units, and representing their interests. The focus of the membership and therefore BROA has expanded beyond the oil and gas industry to include offshore renewable activity as well.

<http://www.broa.org/>

Caters Offshore Trade Association (COTA): COTA's main priority is maintaining a collective focus on safety and service delivery for the benefit of our customers and our people. Together we employ over 3,000 employees, including chefs, bakers, stewards and administrative team members.

<http://www.cota.org.uk/>

DECOM NORTH SEA: Decom North Sea was set up to tackle the main areas of weakness and the bottlenecks which are inhibiting UK decommissioning supply-chain capability.

<http://www.decomnorthsea.com/>

East of England Energy Group (EEEGR): EEEGR is the industry association for energy in the East of England, representing over 350 members across the supply chain.

<http://www.eeegr.com/>

Emergency Response & Rescue Vessel Association (ERRVA): The Association represents the owners and operators of the UK Continental Shelf Emergency Response and Rescue Vessels (ERRV's).

<http://www.errva.org.uk/home.php>

Energy Industries Council: The EIC is the leading Trade Association providing dedicated services to help members understand, identify and pursue business opportunities globally. Established in 1943, the EIC is a not-for-profit organisation with a membership of over 670 UK-registered companies who deliver goods and services to the energy industries worldwide.

<http://www.the-eic.com/>

Energy Institute: The Energy Institute (EI) is the professional body for the energy industry delivering good practice and professionalism across the depth and breadth of the sector.

<http://www.energyinst.org/home>

Energy North: Energy North is a “not-for-profit” trade group of over 160 members in the Oil & Gas, Renewable Energy and Nuclear markets. Our area of operation covers Aberdeen, Orkney & Shetland, Caithness, Ross-shire, Inverness, Moray, Argyll, and the Outer Hebrides. This confirms the Energy North as the voice of Energy in the North of Scotland and Islands.

<http://www.energynorth.co.uk/Home.aspx>

Engineering Construction Industry Training Board (ECITB): The ECITB provides professional advice, information, skills development and qualifications to help individuals within engineering construction succeed in their chosen careers.

<http://www.ecitb.org.uk/>

Engineering and Physical Sciences Research Council: EPSRC is the main UK government agency for funding research and training in engineering and the physical sciences, investing more than £800 million a year in a broad range of subjects – from mathematics to materials science, and from information technology to structural engineering.

<http://www.epsrc.ac.uk/Pages/default.aspx>

FPAL: FPAL works to identify, qualify, evaluate, and monitor suppliers on behalf of its purchasing members.

<http://www.achilles.com/en/FPAL/>

Industry Technology Facilitator (ITF): Key objectives are to identify technology needs, foster innovation and facilitate the development and implementation of new technologies. To date, ITF has been responsible in launching more than 180 new collaborative and revolutionary joint industry projects (JIPs), with a portfolio of around 37 ongoing projects linked to £16 million direct member investment.

<http://www.itfenergy.com/>

International Association of Drilling Contractors (IADC): IADC’s mission is to advance drilling and completion technology; improve industry health, safety, environmental and training practices; and champion sensible regulations and legislation which facilitate safe and efficient drilling.

<http://www.iadc.org/>

International Marine Contractors Association (IMCA): IMCA works through and on behalf of its members world-wide promoting offshore safety, addressing technical matters and on a variety of other issues.

<http://www.imca-int.com/>

NOF Energy: Business development organisation working on behalf of companies within the oil, gas, nuclear, and offshore renewables sectors.

<http://www.nofenergy.co.uk/>

Oil & Gas UK: Oil & Gas UK is the leading representative body for the UK offshore oil and gas industry. It is a not-for-profit organisation, established in April 2007 but with a pedigree stretching back over 30 years. Membership is open to all companies active in the UK continental shelf, from super majors to large contractor businesses and from independent oil companies to SMEs working in the supply chain.

<http://www.oilandgasuk.co.uk/>

Oil & Gas Independents Association (OGIA):

<http://www.ogia.co.uk/>

Offshore Contractors Association: The Offshore Contractors Association is the lead representative body for contractors. Based in Aberdeen, the organisation looks after the interests of more than 70 companies involved in a range of activities including mechanical, electrical and allied services, construction, modifications and maintenance work, design and project engineering, fabrication and decommissioning.

<http://www.aberdeenrenewables.com/members/complete-a-z-index/offshore-contractors-association-1/>

OPITO: OPITO is the industry's focal point for skills, training and workforce development. It is a self-sustaining, employer and trade union led organisation committed to developing and sustaining a safe, skilled and effective workforce now and in the future. This is achieved by working in collaboration with: industry employers, learning & training providers, education & academia and partnership organisations.

<http://www.opito.com/uk/>

Subsea UK: Subsea UK is the industry body and focal point for the entire British subsea industry and aims to increase business opportunities at home and abroad for the sector.

<http://www.subseauk.com/>

ANNEX E: Sources

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