

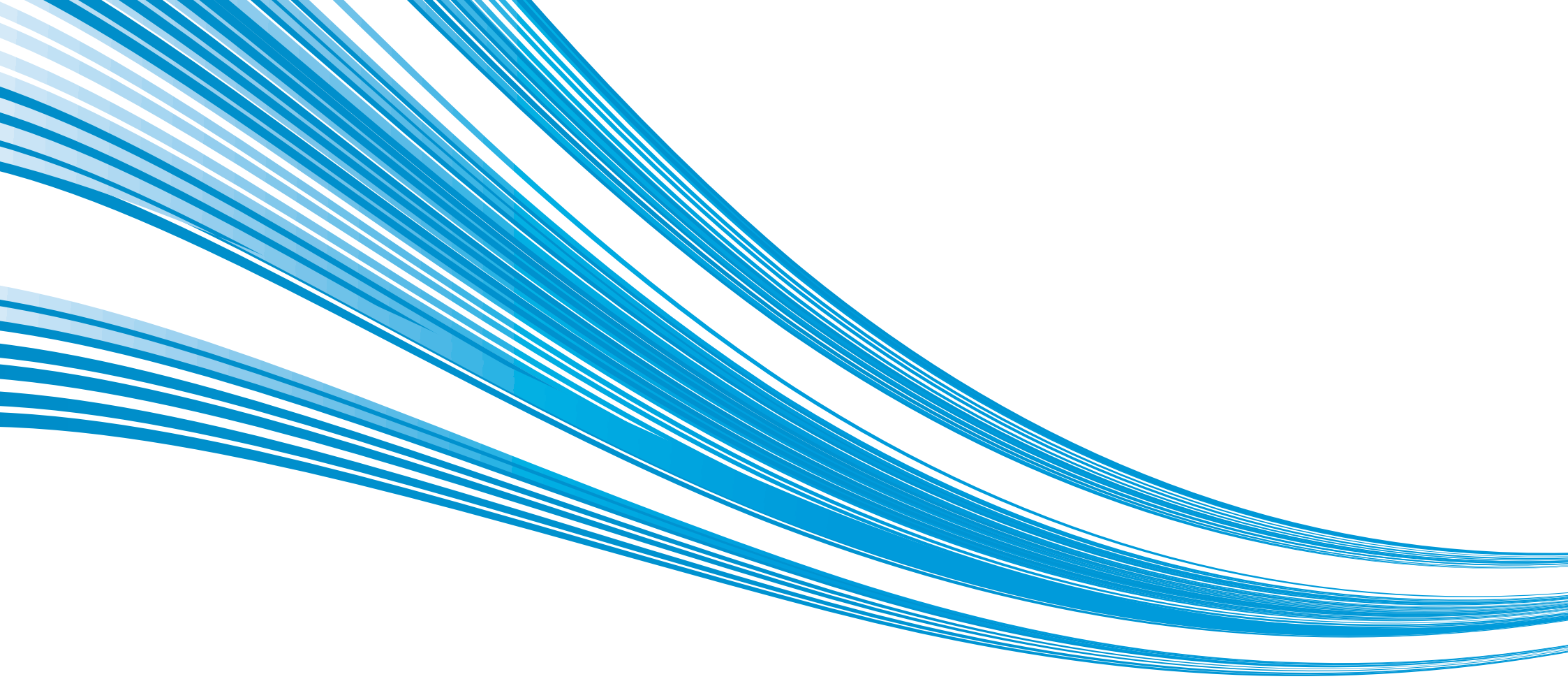
OIL + GAS

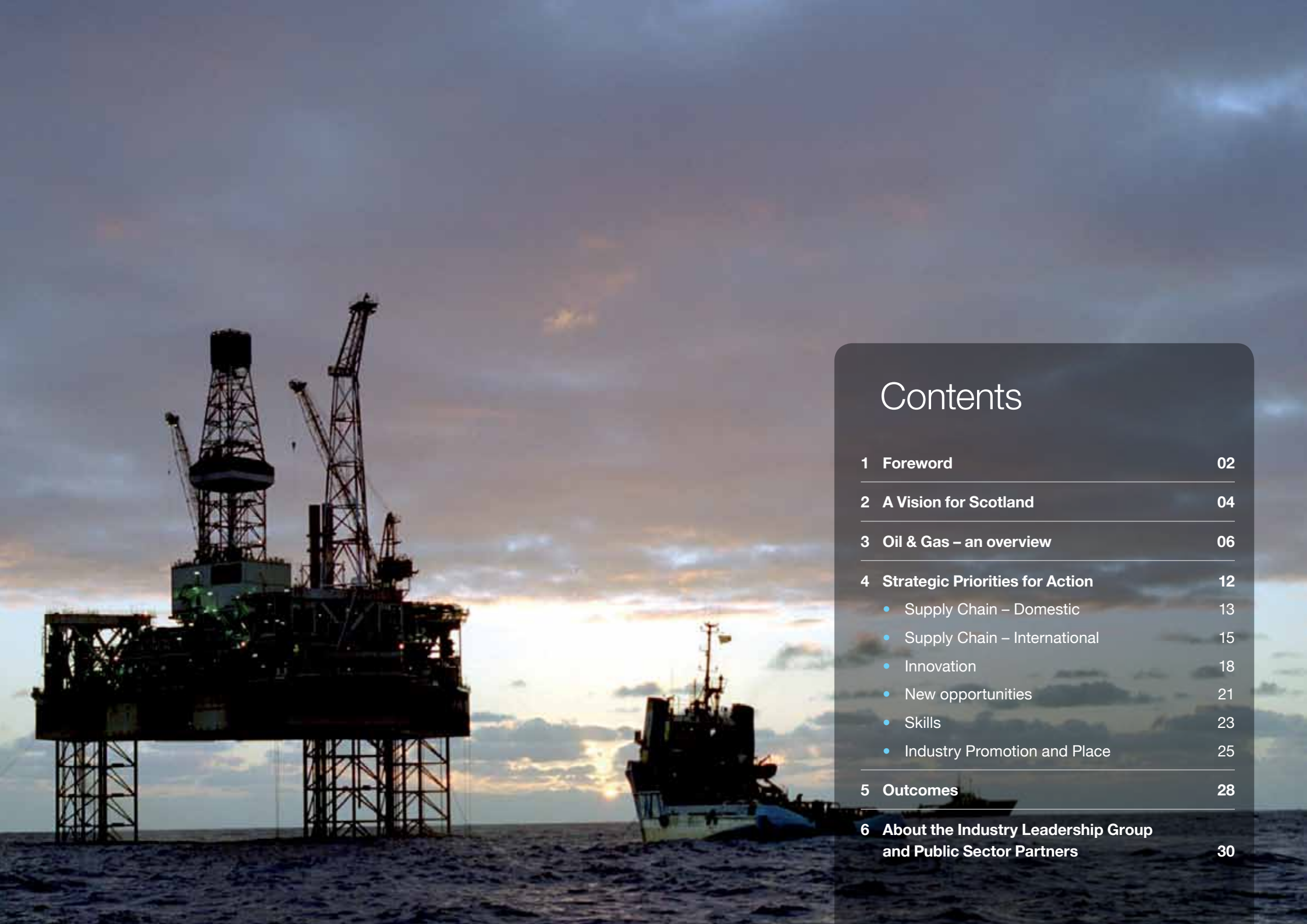
STRATEGY 2012-2020



Maximising our Future

O&G ILG
Oil & Gas Industry Leadership Group





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1. Foreword

02

This strategy document sets out a clear vision for the long-term future of the oil and gas industry in Scotland. The strategy highlights the opportunities for the sector and the priorities for future action by industry, government and other stakeholders if this potential is to be realised.

While there has understandably been a recent focus on developing the opportunities around the renewable sector in Scotland, it is also vitally important to recognise the long-term importance of the oil and gas sector in its own right. Although peak production may have passed, the sector remains one of the most important to the Scottish and UK economies, both in domestic and export terms. This will be the case for many decades to come.

The overall theme of this strategy is maximising resource recovery through industry-led innovation, strengthening our supply chain, both domestically and internationally and enhancing our skills base.

Ensuring the maximum recovery of resources will have a number of benefits. It will have a significant impact on our energy security and make a considerable contribution to both the balance of payments and through taxation to government finances. In addition, the sector and its supply chain will develop the technologies and capability to remain a driver of wider economic activity and growth.

The oil and gas sector in Scotland has a strong record of achievement over 40 years. Many of the skills and services developed in this country can be found throughout the world and distinctive strengths exist in sectors including subsea, safety, integrity and supply chain management. We need to ensure that the competitive advantage we have within the sector endures. It is critical that opportunities, both within the sector and in new emerging markets are fully realised. Future development will come from enhancement of our existing strengths which will allow us to exploit potential for further growth.

This strategy has been subject to significant consultation with industry during its formulation. The Oil & Gas Industry Leadership Group (ILG), which we co-chair, will continue to guide and advise Scottish Enterprise, Highlands & Islands Enterprise, Scottish Development International, the Scottish Government and others. This guidance will focus on the strategic priorities identified and subsequent activities to assist companies and the sector to grow, as well as consider what support industry needs to provide.

This strategic approach complements the work of other bodies and organisations such as PILOT and the strong industry associations involved in the sector. This includes Subsea UK, Oil & Gas UK, Decom North Sea, Industry Technology Facilitator, OPITO and the Offshore Contractors Association.

Action plans for each of the priority areas are being developed.

These will set out in detail the actions required to support each area so that our vision of a long-term prosperous sector can be realised. Actions such as calls for innovation in oil and gas technologies, export support and the provision of detailed information on future market prospects will deliver concrete benefits to companies and the economy.

In particular, we are convinced of the need to communicate to young people the varied, rewarding and lifetime career opportunities available in the oil and gas sector. We are equally convinced of the need to improve the capacity of our education and training system in Scotland to supply the people that the industry requires. Industry, Government and other stakeholders will need to work together to engage, enthuse and inspire our younger generation to develop careers in oil and gas.

Collaboration and leadership across the sector and between companies, government and public sector agencies will be essential to ensure that resources are exploited, priorities are taken forward and the industry in Scotland remains in a world-leading position. Achieving the vision and the aspirational outcomes set out in this document will require commitment, enthusiasm and buy-in from all parties.

The oil and gas sector will remain one of Scotland's outstanding economic sectors for many years to come. This document sets out a clear path as to how the sector can grow and prosper. The future is bright and while many of these opportunities will be progressed by individual companies, there are clear advantages in collaboration within the industry in areas such as skills, innovation, infrastructure and the communication of key messages about the importance of the sector.



The shared goal of all stakeholders must be to maximise the impact of the sector for the Scottish economy.

We would like to take this opportunity to thank all of those who have contributed towards the development of this strategy and we look forward to seeing the results of its implementation. We want to leave no-one in any doubt about the continued importance of this sector to Scotland.

Fergus Ewing MSP

Minister for Energy, Enterprise and Tourism
Scottish Government


Melfort Campbell OBE

Chief Executive, Imes Group

Co Chairs of the Oil & Gas Industry Leadership Group

2. A Vision for Scotland

Our vision is of an industry which builds on its reputation to become an even more integral part of the Scottish economy. We want the sector to attain an even greater profile on a global basis, where Scottish expertise and leadership is recognised across the world. A sector where the pace of export growth is even more rapid, inspiring companies to seek new opportunities and attract people by offering a wide range of diverse and long-term employment.



This vision is based around maximising the recovery of oil and gas reserves and will be at the heart of everything the sector does. This will have a number of benefits, including being a cornerstone of our energy security and contributing even more towards revenues, as well as driving economic activity and growth, both domestically and further afield.

This vision of maximum resource recovery will be built around:

- **strengthening our supply chain expertise at home and overseas**
- **applying innovation and technology**
- **utilising our skills**

The sector will have the following characteristics:

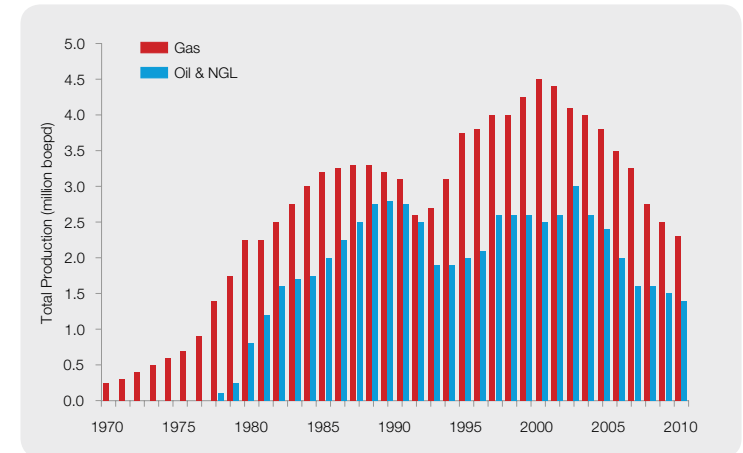
- A world leading supply chain in many specialist areas, which is firmly grounded in Scotland
- A dynamic, fast-growing company base in receipt of appropriate support from the public sector to assist its development
- Enhanced application of innovation and technological developments central to increasing recovery levels and maintaining intellectual capital in Scotland
- Accelerated internationalisation at an even faster rate than in recent years
- Increased recognition of Scottish skills and expertise around the world
- Pursuit of diversification opportunities, many of which will require skill sets developed by the oil and gas sector

- Continued research and development from our world class academic institutions across Scotland demonstrating world leading capabilities
- Greater collaboration within the sector on issues which are of cross-sectoral importance
- A sector which continues to be seen as an exciting and attractive career of choice, especially for younger people, offering a wide range of stimulating and rewarding opportunities

Overall, it will be a sector where our competitive advantage built up over many years has been enhanced, strengthened and where new opportunities have been seized upon.

3. Oil & Gas – an overview

For almost 40 years, oil and gas has been produced from the UK Continental Shelf (UKCS). The industry is, and will remain, vital to Scotland and the UK for the energy it produces, the employment it creates, the technology it has advanced and the future opportunities which it will offer.



UK Oil and Gas Production, 1970-2010

Source: Oil & Gas UK 2011 Economic Report

The sector to date

Two years after the first oil came ashore from the Argyll Field in 1975, the Clair Field to the west of Shetland was discovered by BP. The longevity of the UK industry is illustrated by the fact that the second phase of development of the Clair Field has recently commenced with a 40-year design life and the potential to produce 640 million barrels of oil. The Clair Field is an example of a development which has already made a significant contribution to Scotland and continues to have a bright future. It is just one example of a number of recent announcements of new investment into the North Sea, a continuing sign of industry optimism about its long-term prospects.

Over the past four decades £300 billion has been invested in the UKCS, including £8.5 billion of capital investment in 2011. A further £31 billion is committed and in progress at the start of 2012.¹ The oil and gas sector remains the largest industrial investor across

the UK and is responsible for almost 20% of the total corporation tax paid to the UK Government.

The industry provides employment for around 440,000² people across the UK with around 200,000 jobs in Scotland. Of this UK total, there is an estimated 240,000 employed directly by oil and gas companies and the wider supply chain; 100,000 supported by the economic activity as a result of employees' spending; and a further 100,000 supported by export business.

To service this industry, a sophisticated supply chain has evolved with the development of world class companies in Scotland and strengths in many areas including project management, subsea, well management and training services. In Scotland alone there are an estimated 2,000 supply chain companies in the sector. A critical cluster is based around Aberdeen and the North East of Scotland but there is also

significant expertise throughout the country including the Highlands & Islands and the central belt of Scotland.

Additionally, wherever there is oil and gas in the world, Scottish expertise is helping to recover it. 46% of sales from the Scottish-based oil and gas supply chain is now attributed to overseas markets. Ten years ago, this figure was 31%. While domestic sales have continued to increase, sales to overseas markets have risen at a faster rate. This is testimony to the Scottish-based skills and expertise in demand throughout the world. Simply put, oil and gas is a sector in which Scotland excels. With our natural resources we have developed world leading companies, skills and expertise which are increasingly in demand on a global basis.

¹ Source: Oil & Gas UK 2012 Activity Survey

² Source: Oil & Gas UK 2011 Economic Report

Future Prospects

While 40 billion barrels of oil equivalent (boe) has been recovered from the North Sea to date, significant amounts of oil and gas remain. The level of recoverable reserves has been calculated in the range of 12-24 billion boe. While future oil prices cannot be guaranteed, future high prices are likely which means the North Sea has considerable economic life. The wholesale value of the remaining reserves in the North Sea has been estimated to be up to £1.5 trillion. The University of Aberdeen has calculated that developments in the West of Shetland alone could generate up to \$600 billion (£370 billion) in new revenues over the next 40 years.

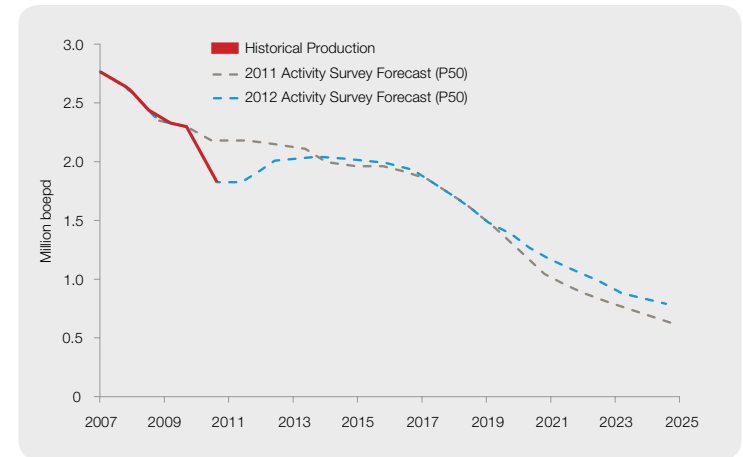
Fossil fuels are likely to be the primary source of energy demand on a global scale over the next few decades as demand for energy rises along with economic and population growth. This means that oil and gas is

expected to remain as the primary energy source for many countries for some time yet.

This is also the case domestically. The UK currently relies on oil and gas for 75% of its primary energy needs. Over the next decade this will fall only marginally to 70%, even if the UK Government target of sourcing 15% of all energy from renewable sources is achieved.

Demand and, therefore, opportunities for oil and gas will continue to be a key part of our economic landscape.

New fields and opportunities continue to be found and interest in the North Sea through the regular licensing rounds remain high. While the discoveries of today tend to be smaller and more technically challenging than in previous decades, the potential for future development is still considerable.



UKCS Production Outlook

(showing actual decline since 2007 and projection; also showing last year's survey - P50 slipped forecasts)

Source: Oil & Gas UK 2012 Activity Survey

The nature of the North Sea has also changed in recent years with new, independent operators taking on existing assets with a focus on maximising recovery through the application of new technology and new approaches to field and well management.

Future Investment

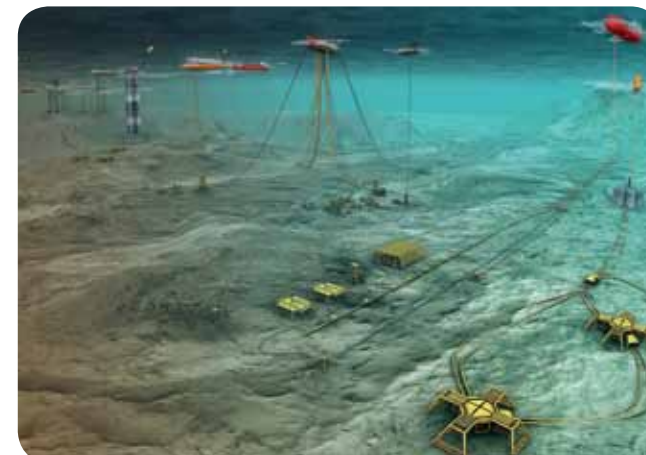
The actual level of hydrocarbons extracted from the North Sea will be determined by a range of factors, including **investment**. The latest Oil & Gas UK activity survey highlighted that the 2011 fall in production of 18% was greater than expected. This was due in part to a number of unscheduled maintenance projects and a necessary increase in investment on infrastructure and asset integrity.

Increased operational expenditure to maintain infrastructure in the North Sea is likely to be a trend over the next few years. This may have an impact on operating costs and efficiency, although it will also lead to supply chain opportunities to match the increased spend. Such trends reinforce the importance of sustained investment in relation to production and recovery levels. Investment in technology to support recovery and asset integrity is crucial in this regard.

Technology and Innovation

Future production levels will be determined not just from investment in new fields but also from the development of incremental fields close to existing infrastructure and from extending the life of existing fields. In all these instances, the role of **technology** and **innovation** to drive investment and therefore output will be crucial.

Current recovery levels across the sector average around 40%, although this varies by individual fields. This is low when compared to some other provinces. Even an apparently small percentage increase in recovery rates can lead to significant future opportunities. For example, every percentage point increase in recoverable reserves from the North Sea would result in a rise in economic output of £89 billion and result in £22 billion of tax revenue³. So a move towards a 50% recovery rate, for example, would unlock around £890 billion of output and £220 billion



of taxation. The use of enhanced oil recovery techniques in the North Sea has been calculated as leading to an additional 4-6 billion boe, equating to a minimum of around £360 billion of economic output. The economic rewards of extracting more oil and gas from the North Sea are clear.

³ Research undertaken for Scottish Enterprise

New Opportunities

While assisting in terms of security of supply, the oil and gas industry also has a key role to play in the long-term transition towards a lower-carbon economy.

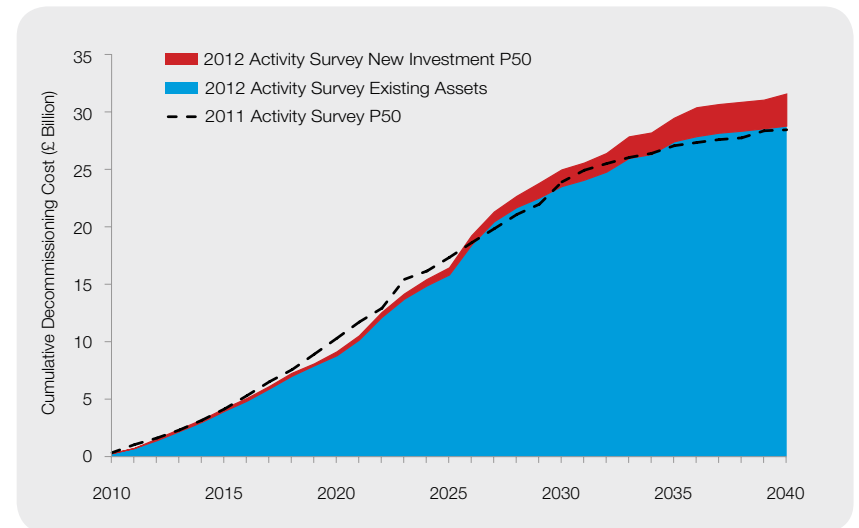
For example, recent research published by Scottish Enterprise suggests the skills, knowledge and expertise of the oil and gas supply chain could help reduce the costs of offshore wind operations by at least 20%⁴. Expertise in areas such as project management, installation, personnel transfer and operational and maintenance activity could make a clear contribution towards the development of offshore wind projects.

The oil and gas industry's knowledge of undersea geology, reservoir management and pipeline transport could play a vital role in the development of Carbon Capture and Storage (CCS). Depleted oil and gas fields provide the most immediate natural repositories for

storing carbon and the North Sea is seen as the premier location for European offshore carbon storage.

There are also major opportunities which will develop in the next few years in the embryonic unconventional gas market such as shale gas, tight gas and coal bed methane. Shale gas in particular has significantly impacted the American energy market in recent years. Technological advances in the conventional oil and gas market have made the exploration of unconventional reserves increasingly viable. Some of the skills developed in the offshore oil and gas sector will be applicable to these emerging markets.

While the use of technology and increased recovery means that many fields will operate beyond their initial expected life cycle, a considerable number of fields and installations will be decommissioned over the next 10 – 15 years. Oil & Gas UK has estimated



Cumulative Cost of Decommissioning

Source: Oil & Gas UK 2012 Activity Survey

that total decommissioning spend on existing and sanctioned projects now stands at £29 billion with a possible additional £4.3 billion of investment in future decommissioning projects. Such opportunities will require significant planning to ensure maximum opportunities for the supply chain and to ensure that the right skills are in place.

⁴ A Guide to Offshore Wind and Oil & Gas Capability, Scottish Enterprise, September 2011



Enhancing and Applying our Competitive Advantage

Scotland already has an international competitive advantage in many sectors such as subsea, well and reservoir management, design and project management, training and asset integrity work.

Scotland also has a strong track record in innovation, exports, high value jobs and a world-leading supply chain base, with all the subsequent benefits that a concentrated cluster of skills and expertise can create.

The potential for future growth, both domestically and internationally, is clear.

However, in recognising our strengths, we also need to consider the challenges.

The 2011 changes to the tax regime for the UKCS impacted upon industry confidence, although optimism is slowly returning and the 2012 budget proposals have generally been well received.

The importance of the industry and its contribution to the economy must be communicated and understood more widely. Oil and gas is our primary source of energy and a critical economic driver. These fundamentals need to be recognised, not only within the energy sector and by Governments but across our population.

Scotland is viewed as an excellent location and source for oil and gas related activity and training. However, attracting appropriate skills to the industry is increasingly viewed as a significant challenge. Industry must work together to encourage collaboration and to look at ways to increase the size of the talent pool.

Innovation is a crucial driver of maximum recovery. An emphasis on investment in sectoral innovation in the UK is required to reverse the decline experienced in recent years.

Adequate and effective infrastructure has been highlighted as a key issue. To ensure that Scotland remains an attractive choice for companies and investment, improvements in connectivity and infrastructure, in the North East of Scotland in particular and further afield, are seen by many as being absolutely essential.

There has been a number of recent investments announced in the North Sea. However competition for investment remains intense and is viewed on a global basis.

It is therefore vital that the North Sea continues to be viewed as an attractive long-term investment location. The challenge is to capitalise on existing strengths, address challenges and deliver actions to ensure maximum resource recovery and a long-term successful sector. Scotland's competitive advantage will be enhanced through investment in people, in companies, in technology and in infrastructure.



4. Strategic Priorities for Action

The following six priority areas have been identified as central to our objectives:

- Supply Chain – Domestic
- Supply Chain – International
- New Opportunities
- Innovation
- Skills
- Industry Promotion and Place

Supply Chain – Domestic

What do we want to achieve?

A supply chain increasingly focused on resource recovery, more aware of innovation to drive company growth, and firmly anchored in Scotland.

Why do we want to achieve this?

In developing the technologies and capabilities to significantly improve rates of recovery in the UKCS we set the foundation for long-term international performance.

The Scottish oil and gas supply chain currently comprises around 2,000 companies ranging from very small companies and operators through to multinationals, providing direct employment for around 100,000 people throughout Scotland.

It is already internationally recognised for its capability and competitive advantage in a number of areas particularly:

- Health, Safety and Environment (HSE)
- Subsea
- Downhole
- Subsurface
- Project management
- Engineering design

- Asset integrity
- Fabrication
- Skills & training

The latest domestic sales from the Scottish-based oil and gas supply chain were estimated at almost £9 billion⁵. This makes it the most important industrial sector in Scotland. Since 2005 however, domestic sales have grown at a slower rate relative to international sales.

In the long-term the domestic market must continue to be sustained and developed. This will require the industry to maintain and anchor a strong supply chain in Scotland. This would include company expansion, provision of skills, and application of technology and innovation. The Scottish supply chain is absolutely central to achieve the vision of a resource maximising sector.

⁵ Survey of International Activity in the Oil and Gas Sector 2010/11, SE/SCDI

How are we going to do this?

Encourage company growth

- Commit more resources to support companies in the oil and gas sector. The ILG has endorsed and supports proposals from Scottish Enterprise to do this with a focus on measures to increase recovery levels and innovation.
- Provide additional targeted support for the supply chain. The ILG has committed to working with industry and public sector agencies to highlight more widely the range of support and advice available.
- Address key issues and challenges such as access to finance and skills. The ILG and industry bodies will work to identify challenges, communicate these and help industry deliver action accordingly.

- Increase public sector support to companies with significant growth prospects. This will include not only SMEs but also larger companies in order to encourage continued investment in the North Sea and to ensure they remain anchored in Scotland.

Increase market knowledge

- Create awareness of future market opportunities through the publication and communication of market information. This will include both current and emerging opportunities in areas such as unconventional gas. Industry bodies and public sector agencies will communicate these opportunities to the supply chain.



- Promote recognition of Scottish supply chain capability. This will include sector specific events where operators, contractors and inward investors discuss issues of common interest and opportunity.

Key Support Partners

- Scottish Enterprise (SE)
- Highlands & Islands Enterprise (HIE)
- Scottish Development International (SDI)
- Department of Energy and Climate Change (DECC)
- DECOM North Sea
- Energy North
- Industry Technology Facilitator (ITF)
- Offshore Contractors Association (OCA)
- Oil & Gas UK
- OPITO
- Subsea UK

Supply Chain – International

What do we want to achieve?

For internationalisation to increase at an even faster rate than in recent years, with our knowledge and products deployed in more countries and markets, while also ensuring that Scotland remains an outstanding location for investment.

Why do we want to achieve this?

Whilst the North Sea will offer significant opportunities, international markets have become increasingly important for the supply chain.

In 2010/11 international sales from the supply chain were valued at £7.6 billion; 46% of total Scottish sales. This share compares with 31% in 2002⁶.

The Scottish oil and gas supply chain now records sales in over 100 countries.

In terms of geography, North America remains a key market, with strong growth also occurring in West Africa, Brazil, Norway, Australia and the ASEAN countries. There has been significant growth in exports in a number of sub-sectors in recent years including subsea, project management and design services. The subsea sector, in particular, is a key global strength for Scotland.

Oil and gas can therefore make a critical contribution towards the aim of the Scottish Government to increase the level of total exports from Scotland by 50% by 2017. The ILG has indicated that 65% growth from the sector over the period is achievable.

To ensure the long-term health of the sector for Scotland, engagement with international oil companies (IOCs) will remain important. Building connections with major National Oil Companies (NOCs) will also become increasingly significant but may be more challenging. Continuing to develop relationships and seek opportunities will be vital.

For example, some countries are placing a levy on research and development activity. This may present opportunities for Scottish companies to partner internationally in technology development.

Priority markets

Through the formulation of this strategy, the following geographies have been identified as priority markets. They offer both the greatest scale of opportunity and also the closest match with existing Scottish capability:

- North America
- Brazil
- West Africa (Angola, Ghana, Nigeria)
- Norway
- Russia
- Azerbaijan
- China
- Australia
- ASEAN countries and
- The Middle East

⁶ Survey of International Activity in the Oil and Gas Sector 2010/11, SE/SCDI

Together these priority markets currently account for two-thirds of total international supply chain sales. These markets will be reviewed to reflect changing economic and political circumstances. Future market opportunities elsewhere, particularly in the Arctic region and East Africa will also be assessed.

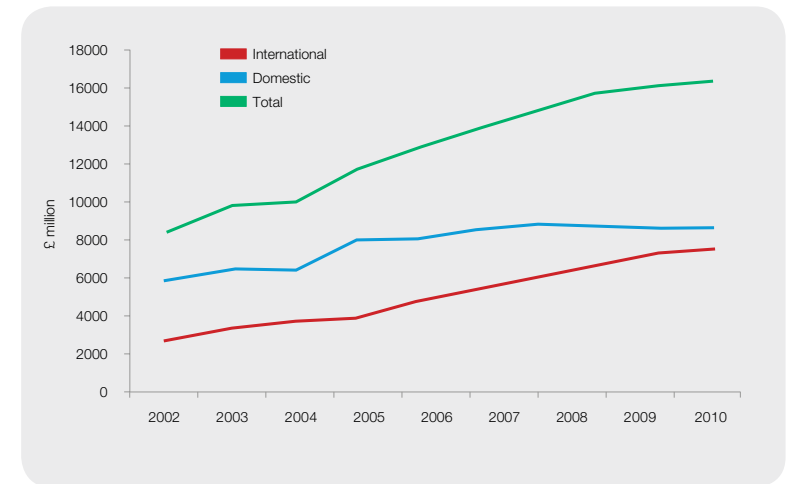
How are we going to do this?

Increase the number of Scottish-based businesses exporting

- Encourage and assist more companies to enter international markets, while continuing to support those companies already exporting.
- Provide support to assist companies to prepare for market entry. This will include market entry strategies, market information and research, introductions to key contacts, and visits to overseas exhibitions and events where Scottish capability can be showcased.
- Provide additional resource in priority markets. The ILG supports Scottish Development International's plans to deploy additional resources in a number of the priority markets.

Understand the opportunities

- Provide detailed information on priority export destinations and sub-sector opportunities. This will assist both new exporters and those unfamiliar with specific overseas markets.
- Examine and assess opportunities in overseas markets against Scottish-based capability. For example, expertise in well management is likely to be in demand for some aspects of the development of new gas markets in the Middle East.
- Promote recognition of Scottish capability and excellence by encouraging National Oil Companies (NOCs) and International Oil companies (IOCs) to visit Scotland to identify how this could be utilised in their home markets.



Oil & Gas Supply Chain
International and Domestic Market (2002-2010)

Source: Survey of International Activity in the Oil and Gas Sector 2010/11, SE/SCDI



Strategic inward investment

- Explore new inward investment opportunities. This will involve working with management of both Scottish-based companies and investor's headquarters. Previously, inward investment has been attracted from many parts of the world including USA, Canada, Norway and France.
- Strengthen linkages between inward investors and stakeholders, including economic development agencies, so that opportunities for further investment are pursued wherever possible.

Key Support Partners

- Scottish Development International (SDI)
- Highlands & Islands Enterprise (HIE)
- United Kingdom Trade & Investment (UKTI)
- Subsea UK
- Africa Business Group
- Energy North
- Aberdeen City Council
- OPITO
- DECOM North Sea

Innovation

What do we want to achieve?

Clear priorities for innovation, and for priority technologies to be supported and deployed more rapidly to market, to help increase recovery levels in the long-term.

Why do we want to achieve this?

The UK is acknowledged for its excellence in many technology areas – most notably in subsea and deep and ultra deep water developments. Technology has already led to many fields in the North Sea extending beyond their initial shelf life and additional millions of barrels of oil and gas being recovered. However, the UK Continental Shelf (UKCS) remains one of the slowest provinces to adopt new technology.

The average time from proof of concept to market penetration in the oil and gas industry worldwide has been estimated at 16 years but there is evidence that the UKCS takes significantly longer than this. By contrast Norway is achieving its technology goals, set out in its OG21 framework, and has successfully accelerated development from proof of concept to market penetration in around 8-10 years.

Despite much advancement in technology, recovery rates in some fields within the North Sea remain relatively low in international terms and in some instances there are opportunities to increase recovery through the application of techniques such as enhanced oil recovery.

The UK possesses an excellent oil and gas technology capability within academia, SMEs and the service sector. The oil and gas industry, however, invests an average of only 0.3% of sales on R&D in the UK. Many major operators have now chosen other countries for their main R&D centres.

The challenge is, therefore, to ensure that technology comes to market more quickly in the future to improve recovery and aid efficiency. As oil becomes more challenging to produce, then the use of technology

becomes even more important. The nature of the North Sea, with current and future finds being smaller than in previous decades, means that we need to adopt an approach to technology and innovation which will help to develop such finds at a lower cost. This requires collaboration and a real shift in thinking and approach, both from operators, the supply chain and public sector agencies in a number of areas including training and skills development.

Through research for this strategy, the following areas were identified as priorities for future innovation support:

- Enhanced/Increased oil recovery
- Ageing infrastructure
- Subsea
- Development of non-conventional hydrocarbons



Discussion with industry has revealed significant interest in proposals to bring greater clarity to innovation support for the sector. Within the UK there are a variety of sources of public funding including Research Councils, the Technology Strategy Board, and Scottish Enterprise, amongst others. There are also sources of industry funding including the Industry Technology Facilitator (ITF) and investment funding (e.g. venture capital and private equity), as well as investment by individual companies.

Utilisation of future technology will ultimately be through the deployment decisions of individual companies. However the public sector, in collaboration with the supply chain and academia could support the development of technologies that industry state will be required.

How are we going to do this?

Develop a more coherent approach to oil and gas Innovation

- Develop proposals to clarify innovation support for the sector. For example, a clear need has been identified for a more co-ordinated approach to public sector funding for oil and gas technology.
- Work in partnership with PILOT to develop a shared industry and government innovation and technology vision with a focus on identifying priorities for future support. The ILG is currently assisting with this.
- Develop a long-term R&D plan for the sector. This complements the vision above and will need support from industry and the public sector with a commitment to lever both public and private sector funding. The plan will consider issues such as potential barriers to the use of enhanced oil

recovery technologies and consider appropriate action to address such barriers. The ILG will help bring industry and other stakeholders together to develop and support this plan.

Increase investment in innovation

- Issue calls for proposals focused on technology priorities. In the short-term, Scottish Enterprise, working with other agencies and partners will issue innovation calls in areas such as enhanced oil recovery technologies, improved reliability and integrity of ageing assets e.g. facilities, pipelines, subsea. Industry has indicated significant interest in working with stakeholders in this area and operators are encouraged to continue their proactive approach to calls and consider what help, assistance and leverage they can provide to assist the faster deployment of technology.

- Continue company-based support for sectoral innovation and R&D activity and promote industry wide. The economic development agencies and industry bodies have key roles in this area.
- Support development of international research facilities. An example is the National Subsea Research Institute (NSRI). Assistance and further industry and academic cooperation is required.
- Promote and support our Universities' world leading strengths and encourage academia and industry to share innovative ideas.
- Investigate opportunities to develop technical capability in non-conventional hydrocarbons including shale gas, hydrates, and sour oil and gas. These are likely to offer significant future overseas opportunities.
- Encourage demand-led approaches to stimulate investment in applied technologies by companies operating near to market.

Key Support Partners

- Department of Energy & Climate Change (DECC)
- Energy Research Partnership
- Energy Technology Partnership (ETP)
- Industry Technology Facilitator (ITF)
- PILOT
- National Subsea Research Institute (NSRI)
- Subsea UK
- Technology Strategy Board (TSB)
- DECOM North Sea

New opportunities

What do we want to achieve?

For the supply chain to be aware of and actively pursue opportunities in other sectors based upon a clear understanding of where those opportunities lie and where they can add value.

Why do we want to achieve this?

The Scottish oil and gas supply chain has over 40 years experience working in the offshore environment. The technical capabilities developed here can be applied to emerging sectors such as offshore renewables, decommissioning (oil and gas but also nuclear) and Carbon Capture and Storage. Each of these sectors present significant market opportunities for the Scottish oil and gas supply chain.

“The marine technology, skills and expertise pioneered in oil and gas are important in the design, installation and maintenance of offshore wind turbines and therefore, have a key role in the continuing evolution of renewable energy” (Oil & Gas UK).

There have already been examples of significant cross over and interaction between some of these sectors. For example, a number of oil and gas supply chain companies have become active in the Offshore Wind

sector and indeed have set up their operations in Scotland. Research published by Scottish Enterprise has already identified priority areas where the oil and gas supply chain could reduce costs of offshore wind operations by around 20%⁷.

Investment in these new opportunities and the application of oil and gas expertise will bring benefits to both the new sectors and the oil and gas industry through efficiency, new markets and improved financial performance. This is not viewed as a replacement for oil and gas activity but as additional long-term opportunities.

⁷ A Guide to Offshore Wind and Oil & Gas Capability, Scottish Enterprise 2011

Priority Sectors

The following represent opportunities for the oil and gas supply chain:

- Decommissioning
- Offshore Wind
- Marine Energy
- Nuclear (both decommissioning and new build outwith Scotland)
- Carbon Capture and Storage
- Defence and security industries

How are we going to do this?

Increase market knowledge

- Raise awareness of future market opportunities in emerging sectors. This will include provision of market reports and working with industry bodies.
- Promote applicable Scottish oil and gas capability. In particular, ensure that operators, major contractors and inward investors within new opportunity areas recognise the capability. This will include continued dialogue and bilateral discussions, particularly around future decommissioning options.

Encourage cross-sector collaboration

- Encourage and facilitate dialogue and learning between sectors. This will include sharing information through workshops and events which demonstrate capability via application of skills, technology and experience.



- Support the extension of remit and coverage of oil and gas groups to new sectors. This will include organisations such as First Point Assessment Ltd (FPAL), Industry Technology Facilitator (ITF), and Leading Oil and Gas Industry Competitiveness (LOGIC).

Support cross-sector innovation

- Encourage greater cross-sector innovation (both process and technology) between energy sectors. The aim is to gain cost reductions or efficiencies in other sectors and new business opportunities for the oil and gas supply chain.
- Provide more detailed information on particular opportunity areas. For example, the publication A Guide to Offshore Wind and Oil & Gas Capability identifies opportunity areas. These will be developed further to detail specific areas such as installation and operations and maintenance.

Key Support Partners

- Oil & Gas UK
- Offshore Contractors Association (OCA)
- First Point Assessment Limited (FPAL)
- Industry Technology Facilitator (ITF)
- DECOM North Sea (DNS)
- Energy North
- Subsea UK



Skills

What do we want to achieve?

To ensure the sector attracts young people and the industry communicates a clear and strong message on future skills needs.

Why do we want to achieve this?

Evidence from various sources report that skills continue to be a major issue for the oil and gas sector and an impediment to growth, with shortages reported, particularly in project management, senior managerial and specialist engineering positions.

Over half of the responses to a recent industry survey by OPITO⁸, identified talent as the primary challenge. OPITO has concluded that an additional 10,000 people need to be recruited over the next five years to meet likely demand. The industry faces increasing competition for skilled staff from other sectors but must be able to attract and retain the best without excessive competition between individual companies and subsequent wage inflation. In addition to the attraction and retention of people, issues around training, competence assurance and skills utilisation (productivity) of the workforce remain imperative.

Issues concerning skills and talent attraction are however complex. Many organisations are engaged in supporting the development of skills for the industry. This ranges through Schools, Colleges and Universities, Sector Skills Councils and industry bodies including Oil & Gas UK, Offshore Contractors Association and Subsea UK, as well as individual companies.

OPITO has a central role to play, while lead public sector responsibility for developing the Scottish skills agenda sits with Skills Development Scotland (SDS) and the Sector Skills Councils. However, industry and other public sector bodies must also contribute to ensure that information is provided and issues are communicated to these lead bodies. For example training and skills providers need to engage with industry on a regular basis to discuss issues of common interest and concern.

An element of competition between companies for skills and people, particularly experienced individuals, is inevitable. However, there is increasing awareness of the benefits that collaboration within the sector might bring. This includes promotion of key messages about the long-term nature and variety of career opportunities that the industry offers, and to recruit people outwith the industry with transferrable skills and experience that may be relatively easily integrated to oil and gas.

⁸ OPITO is an employer and trade union led organisation which is the industry's focal point for skills, training and workforce development.



How are we going to do this?

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Support a strategic approach to oil and gas skills

- Support Skills Development Scotland, OPITO and our Universities and Colleges to take action on oil and gas industry skills in conjunction with views and input from industry. Specifically, ensure that evidence and views from the ILG are fed into the cross-energy Energy Skills Action Group. This Group, reports to the Energy Advisory Board, and has responsibility for the delivery of the Energy Skills Investment Plan published in 2011.
- Support the export of Scottish-based skills and training expertise, where possible, as an asset and economic opportunity for Scotland in its own right.

Industry attraction

- Increase the long-term supply of the labour pool. As part of the work of the ILG, a short life working group has been created to consider how industry and major stakeholders can work together effectively on increasing

skills availability. This will focus on emphasising the long-term nature of the industry, the numerous career opportunities available within it, and seek to increase the labour pool through recruitment from other sectors, especially where redundancies have recently taken place such as the military. This will involve OPITO, Oil & Gas UK, Subsea UK and key company leaders. The group will also consider how to better promote and advertise the vast opportunities that still exist within oil and gas. This will support the wider work of the Energy Skills Action Group.

- Articulate and communicate throughout the UK and beyond the career opportunities available within the sector. There is increasing recognition of the need to invest in marketing the sector, especially to young people, and to ensure that the message of Scotland as an attractive place to live and work is communicated on a global level. Industry has a key role to play, as may networks such as GlobalScot.

Improve skills data and evidence

- Support improvements in skills forecasting methodologies for the sector. This is to ensure that industry forecasts and labour market data are as detailed as possible and include industry-based evidence. Companies will be encouraged to share information with skills bodies.

Key Support Partners

- Skills Development Scotland (SDS)
- Scottish Enterprise (SE)
- Highlands & Islands Enterprise (HIE)
- OPITO
- Oil & Gas UK
- Subsea UK
- Scottish Funding Council (SFC)
- Universities and Colleges
- Aberdeen City & Shire Economic Future (ACSEF)
- DECOM North Sea

Industry Promotion and Place

What do we want to achieve?

For Scotland to continue to be seen as the right place to invest and for the importance of the industry to be more widely recognised so that investment in success occurs.

Why do we want to achieve this?

Oil and gas is our primary source of energy and a critical economic driver. The importance of the industry and its contribution to the economy must be communicated and understood more widely.

By demonstrating the economic importance and world leading capabilities of the oil and gas industry the success of the sector would be better understood at local, national and international levels.

This would strengthen and attract opportunities for further investment and potentially stimulate broader support of the industry.

Scotland has long been recognised as a centre for the UK oil and gas industry, with Aberdeen and the North East of Scotland recognised as the European oil and gas capital. In order to sustain this global role, there is the need to anchor the supply base for the

long-term. Sustaining this will only be possible if sufficient investment is made.

Scotland needs to be sufficiently well connected both nationally and internationally. Improvements to local infrastructure, particularly around Aberdeen City and Aberdeenshire, have been identified as a key issue during the strategy consultation process. For future opportunities to be fully realised, appropriate infrastructure is needed to support a long-term vibrant sector anchored in Scotland. This will require investment and collaboration from both the private and public sectors.

Ambitious public-private projects such as Energetica are designed to foster future innovation and technological advances. Energetica seeks to position the Aberdeen City and Shire region as a global energy hub in the long-term. It aims to create a concentration

of energy technology companies, housing and leisure facilities along a 30-mile corridor from Aberdeen to Peterhead. 30% of the £750 million investment potential is already under way.

To support ambitions and such projects, the private sector, industry bodies and public sector agencies will have a significant role to play in advising key decision-makers and the wider public sector of the continued importance of the industry and the need for further investment.

We need to build an environment in which companies continue to view Scotland as a base for operations, even when an increasing share of their business may lie elsewhere.



How are we going to do this?

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Communicate industry importance

- Develop key messages and provide relevant industry information and facts. These will be communicated widely across stakeholders including public and industry sectors, investors and educational establishments.
- Promote the quality of life Scotland offers and communicate its attractiveness as a great place to live and work.
- Develop the voice of the Industry Leadership Group as an authoritative and effective forum for exchanging views and information between all industry stakeholders.

Liaison with other organisations

- Advise key decision-makers and the wider public sector of the continued importance of the industry and the need for further investment to promote opportunities and economic growth. The private sector and its industry bodies, together with public sector agencies have a significant role to play.
- Work with other stakeholders including the Aberdeen City and Shire Economic Future, Local Authorities and the Scottish and UK Governments to ensure that both infrastructure issues and key industry priorities regarding place and promotion are raised and discussed with the appropriate organisations.
- Consider sources of investment required and availability to improve local infrastructure with a focus on the supply of business space and transport issues.

Key Support Partners

- Scottish Government
- Scottish Enterprise (SE)
- Highlands & Islands Enterprise (HIE)
- Scottish Development International
- Local Authorities
- Aberdeen City & Shire Economic Future (ACSEF)
- OPITO
- Oil & Gas UK
- Subsea UK
- DECOM North Sea
- Offshore Contractors Association (OCA)

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5. Outcomes

Outcomes to be achieved by 2020 have been agreed. These reflect the importance of maximising resource recovery through a focus on technology, skills and company growth, both at home and overseas.

Outcomes

- Total Supply Chain Sales – £30bn by 2020
- International Sales – 60% of the total by 2020 (£18bn)
- Rise in recovery rates with a minimum long term target of 50%

Priorities

- Supply Chain Domestic
- Supply Chain International
- Innovation

Focus


- Resource maximisation
- *Strengthening* our supply chain expertise
- *Applying* Innovation
- *Utilising* our skills

Priorities

- New Opportunities
- Skills
- Industry Promotion and Place

Vision

To maximise jobs, exports and the sustainability of the Scottish oil and gas supply chain with a focus on maximum recovery



These are outcomes which are, of course, aspirational and their likelihood of being achieved will depend on a range of market and global influences and factors. However, based on history and capability, they are long-term outcomes which we believe are achievable.

To achieve such growth will require a focus on:

- the priorities which have been set out
- enhancing our strengths and competitive advantages
- developing the future opportunities, both domestically and internationally
- tackling the challenges and issues which face the industry and all its stakeholders
- encouraging collaboration where it is beneficial to the industry as a whole
- leadership from industry and all stakeholders.

To support this strategy, action plans for each of the six strategic priorities areas are being developed.

These will set out:

- The detailed actions to be taken forward for each priority
- Who is responsible for driving them forward
- Key timescales and milestones
- The role of the ILG in helping to drive progress

The action plans will be shared and discussed at the ILG meetings and regular reports will be produced. This will include development and assessment of key milestones to support each priority and progress towards outcomes. The strategy will remain a live document enabling progress to be monitored and responses made to changes in market conditions.

6. About the Scottish Oil & Gas Industry Leadership Group and Public Sector Partners

The Scottish Oil & Gas Industry Leadership Group (ILG) has been set up to help drive collaboration across the industry and to agree priority areas and actions to support future development.



The Scottish Oil & Gas Industry Leadership Group

The ILG meets quarterly and is co-chaired by Fergus Ewing MSP, the Minister for Energy, Enterprise and Tourism and Melfort Campbell OBE, Chief Executive of the Imes Group.

The group has the following focus:

- To maximise jobs, exports and the sustainability of the Scottish oil and gas supply chain by increasing capability to:
- maximise recovery (and value to the Scottish economy) of remaining North Sea Reserves
- access current and future business opportunities in oil and gas both domestically and around the world
- recognise and diversify into new opportunities in other energy sectors

Membership is comprised of a range of operating companies, supply chain companies, representative bodies, academics, colleges and universities, skills bodies as well as the Scottish Government, Scottish Enterprise, Highlands and Islands Enterprise and the UK government. The approach outlined in this document has been endorsed by the ILG.

The Oil & Gas ILG is part of a number of themed energy groups. This includes the Energy Advisory Board, which is co-chaired by The Rt Hon Alex Salmond MSP, First Minister of Scotland and Professor Jim McDonald, Principal and Vice Chancellor of the University of Strathclyde. The Energy Advisory Board has agreed the following vision statement for Scotland's Energy Industry.

Scotland's energy ambition is to be a world leader in sustainable energy production and use, and to be a prime destination for investment in the low carbon economy. This requires us to:

- deliver more secure, sustainable and affordable energy supplies and increased energy efficiency measures to the people of Scotland to help meet fuel poverty, energy efficiency and emissions reductions targets.
- improve both the energy performance of our buildings and the level of information consumers receive about economic energy use and supply, ensuring support is there for the most vulnerable.
- support the growth of indigenous energy companies and supply chain partners and the development of exportable technologies.
- maximise the economic benefits of increased investment in our energy sector.
- strengthen Scotland's position as one of the world's leading oil and gas centres and establish Scotland as a world leader in innovation and delivery of renewable energy; carbon capture and storage; grid technology; renewable heat; and demand reduction.



Scottish Enterprise

Scottish Enterprise is Scotland's main economic development agency and aims to deliver a significant, lasting effect on the Scottish economy. Our role is to help identify and exploit the best opportunities for economic growth. We support ambitious Scottish companies to compete within the global marketplace and help build Scotland's globally competitive sectors. We also work with a range of partners in the public and private sectors to attract new investment to Scotland and to help create a world-class business environment.

Oil and gas continues to be a key sector, both for the Scottish economy as a whole and for Scottish Enterprise in terms of future growth opportunities. We remain committed to working with companies across the sector to help them grow.

Highlands & Islands Enterprise

Highlands & Islands Enterprise (HIE) is the economic and community development agency for the north and west of Scotland. HIE's purpose is to generate sustainable economic growth in every part of the Highlands and Islands. HIE delivers support to significant and growth businesses and social enterprises largely through an account management model. This enables us to target intervention where it can have the greatest impact on growth and productivity.

Scottish Development International

Scottish Development International (SDI) works to attract inward investment and knowledge to Scotland to help the economy grow. It also helps Scottish based companies to trade overseas and promotes Scotland as a good place to live, work and do business. It is a partnership between the Scottish Government, Scottish Enterprise and Highlands and Islands Enterprise and its work is guided by the Scottish Government's strategy for economic development in Scotland.

Other initiatives include: Smart Exporter – helping companies develop exporting knowledge; GlobalScot – providing practical advice to companies wanting to engage with the global marketplace and TalentScotland – a talent attraction project that showcases Scotland as an outstanding destination to live, work and study.



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This document has been prepared by Scottish Enterprise on behalf of the Oil & Gas Industry Leadership Group.

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