



DEBATE PACK

Number CDP 2020/0036, 20 February 2020

UK oil and gas industry

This pack has been prepared ahead of the debate to be held in Westminster Hall at 9.30am on Tuesday 24 February 2020 on the UK oil and gas industry. The debate will be opened by Andrew Bowie MP. This paper provides a brief overview of the industry and relevant issues, recent parliamentary comment and other press releases and articles.

The House of Commons Library prepares a briefing in hard copy and/or online for most non-legislative debates in the Chamber and Westminster Hall other than half-hour debates. Debate Packs are produced quickly after the announcement of parliamentary business. They are intended to provide a summary or overview of the issue being debated and identify relevant briefings and useful documents, including press and parliamentary material. More detailed briefing can be prepared for Members on request to the Library.

By Suzanna Hinson
Nikki Sutherland, Chris
Rhodes, Paul Bolton,
Richard Cracknell

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1. Background

The oil and gas industry is well-established in the UK, historically focusing on exploiting conventional oil and gas fields, both onshore and offshore.

- The UK was formally a net exporter of oil and gas, but is now a net importer.
- Oil and gas made up 75% of the energy supplied in the UK in 2018.
- In 2018, net imports made up 13% of the oil the UK used, with the remainder from domestic production.
- Net imports of natural gas were 50% of UK supply in the same year.
- The majority of oil, 77% of final consumption, is refined for use in transport.
- Just over one third of the UK's total gas is used for domestic heating, and just under one third for electricity generation. Other major users are industry and business.
- The UK is also a net importer of petroleum products (in total) such as petrol, diesel and heating oils.¹

1.1 Summary: UK Offshore Oil and Gas Industry

- The UK oil and gas industry (both onshore and offshore) employed 31,000 people directly and a further 121,000 in relevant supply chains in 2019, according to estimates from the industry body Oil and Gas UK. Overall, employment in the industry has fallen by 35% since 2013.²
- In 2016/17, government revenues from oil and gas production were £1.2 billion. This was a slight increase on previous years, but overall, tax revenue from oil and gas has declined sharply over the past decade.³
- Drilling has generally been in decline. In 2018, a total of 102 wells were drilled. Other than an increase in development wells from 2017, the number of exploration and appraisal wells commenced in 2018 fell to 8 of each; for development this was the lowest number of new wells since 1965.
- Capital investment has also been falling, with investment of £5 billion in 2018, compared to £16.3 billion in 2014. The industry expects investment to stabilise in 2019 at around £5-5.5 billion per year.
- The cost of decommissioning was increasing to £1.7 billion in 2018, and is expected to level out and cost £1.5 billion per year to 2027.⁴

¹ BEIS, [Digest of UK Energy Statistics 2019](#), July 2019, Table 1.1

² Oil and Gas UK, [Workforce report 2019](#), p10

³ HMRC, [Oil and gas revenue statistics, Table 11.11](#)

⁴ Oil and Gas UK, [Business Outlook 2019](#) p7

Further background information is available from the Library briefing paper on [UK offshore oil and gas industry \(March 2017\)](#).

1.2 Summary: UK Onshore Oil and Gas Industry

- The UK's onshore oil and gas industry has exploited conventional oil and gas sites and had begun exploring the potential for unconventional oil and gas as a result of recent technological developments. These included the use of hydraulic fracturing (or fracking) for the exploration of oil and gas shales as well as coal bed methane extraction.
- The industry body UK Onshore Oil and Gas (UKOOG) says there are 120 total onshore sites with 250 operating wells producing between 20,000 and 25,000 barrels of oil equivalent a day.⁵ The sites (conventional and unconventional) are concentrated in counties towards the North of England and those South of London.⁶
- On 2 November 2019, the UK Government announced that it would take a presumption against issuing any consents to hydraulic fracturing in England.⁷ This was due to a concerns about predicting the probability or magnitude of earthquakes linked to fracking operations. This effectively means that exploratory work on shale has been "paused".

1.3 State of the Market

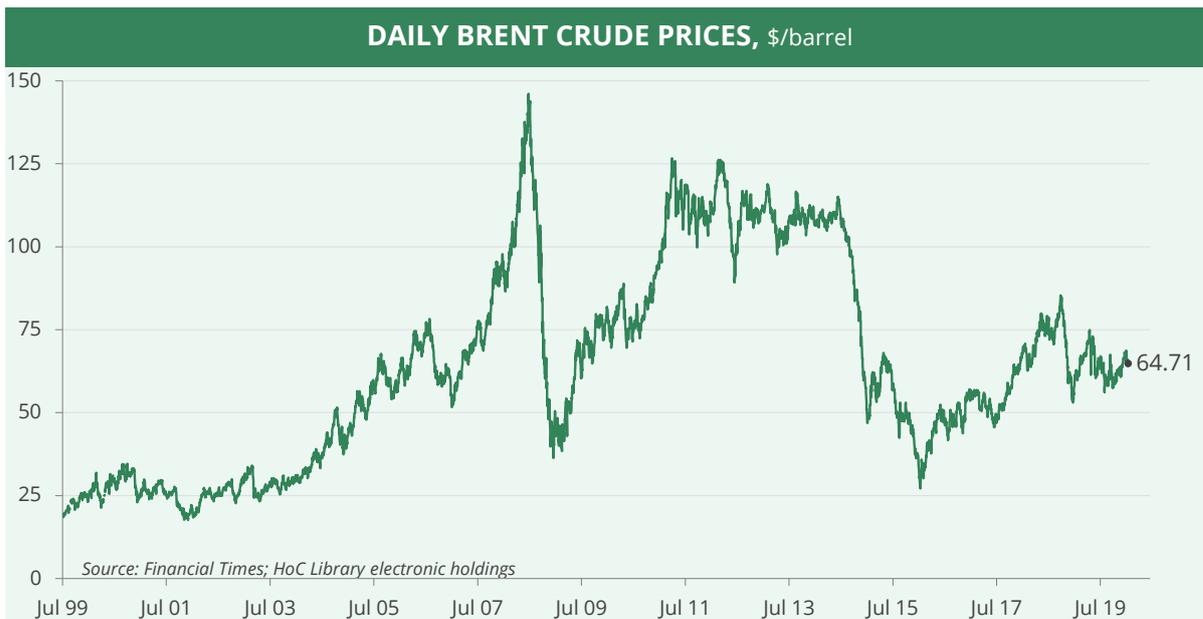
Oil and gas prices are a key driver for the industry and for investment plans.

The price of Brent crude oil reached an all-time high above \$145/barrel in July 2008, before dropping sharply during the world recession. After more than three years of (unusual) stability in the range of \$100-115, Brent prices collapsed dramatically in the second half of 2014. They fell from \$110 in mid-year to \$55 at the end of December 2014. The price fell further to a range of \$25-30 by early 2016 – the lowest levels since 2004. Oil prices rose from summer 2017 to autumn 2018, reaching well over \$80 per barrel. Prices fell sharply to \$53 per barrel in December 2019 and have been in the range of \$55-65 per barrel for most of the last sixth months.

⁵ UKOOG, Onshore extraction – [History](#) [accessed 19 February 2020]

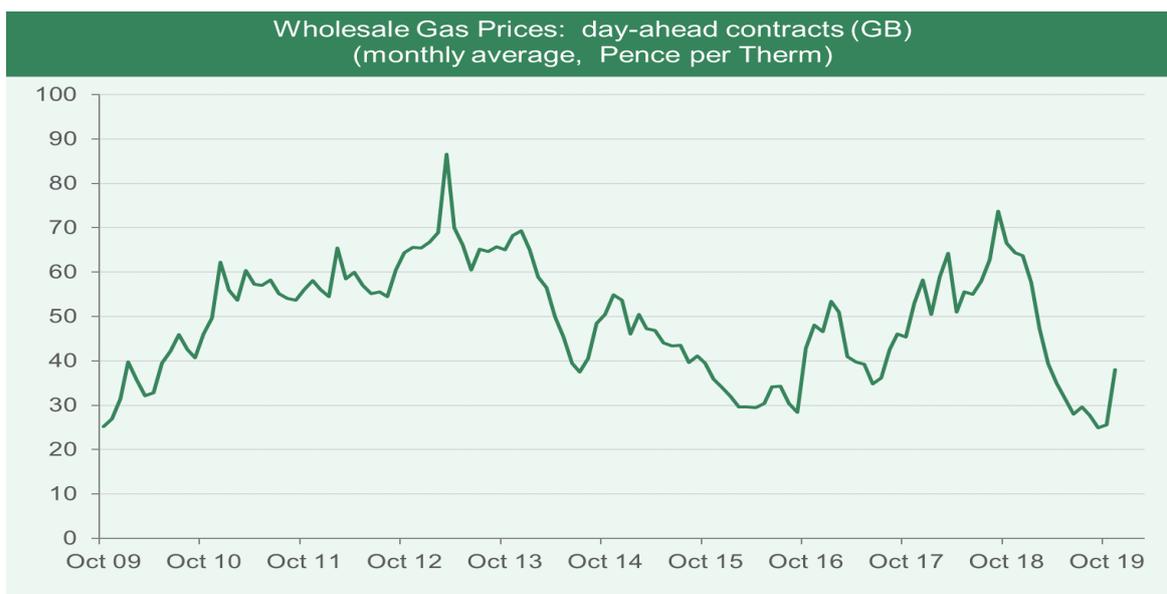
⁶ Oil and Gas Authority, [Onshore Oil and Gas Activity Interactive Map](#) (accessed 19 February 2020)

⁷ Gov.uk press release, [Government ends support for fracking](#), 2 November 2019



The changes are summarised in the chart below. The Commons Library briefing on [Oil prices](#) discusses market developments further.

Wholesale gas prices have been falling since the end of 2018 due to an oversupply of gas. This has continued throughout 2019, particularly due to global liquefied natural gas surplus with GB absorbing significant volumes of this. Additionally, over the past year mild weather and healthy supply margins have continued to push gas prices down. In September 2019, the price fell to 24.87p/therm, a 10 year low. It has recovered since then, to 38.04 p/therm in November 2019. But this is still lower than for all but a few months in the last decade.⁸



⁸ Wholesale prices are 'Day-ahead' gas prices at the GB gas hub (the National Balancing Point) for delivery the following working day, as published on Ofgem's [Dataportal](#)

1.4 Employment in offshore oil and gas

Oil and Gas UK data

The trade association for the oil and gas industry, Oil and Gas UK, produce estimates of employment in the offshore oil and gas industry each year. The following table shows how direct and indirect employment in oil and gas has changed since 2013.⁹

Employment in the UK offshore oil and gas industry							
	2013	2014	2015	2016	2017	2018	2019
Direct	36,600	41,300	37,300	35,600	31,400	30,400	30,600
Indirect	198,100	206,100	169,500	155,100	124,300	116,100	121,000
<i>Total</i>	<i>234,700</i>	<i>247,400</i>	<i>206,800</i>	<i>190,700</i>	<i>155,700</i>	<i>146,500</i>	<i>151,600</i>

Source: Oil and Gas UK, [Workforce report 2019](#), p10; 2019 figures are forecasts

Over the past six years, the number of people employed in the offshore oil and gas industry has fallen by 35% to the forecast level in 2019 of 30,600 direct employees, and 121,000 indirect (or supply chain) employees. Oil and Gas UK state that this overall fall:¹⁰

...reflects a prolonged downturn [in the oil and gas industry], as well as continued cost discipline and a focus on efficiency from exploration and production (E&P) companies

ONS data

The Office of National Statistics (ONS) provide different figures for employment in this sector. The ONS figures are for direct employment only, but include onshore employment in extraction support industries and petroleum product manufacturing. The ONS figures show that in 2018 there were 40,000 people employed in the industry in the following sub-sectors:¹¹

- 13,000 people employed in the extraction of oil and gas (Standard Industrial Classification (SIC) code 06)
- 18,000 people employed in support activities for the oil and gas extraction industry (SIC code 09.1)
- 9,000 people employed in the manufacture of refined petroleum products (SIC code 19.2)

The following chart shows how employment in the oil and gas industry is distributed across the regions and countries of Great Britain. The chart uses the ONS data.

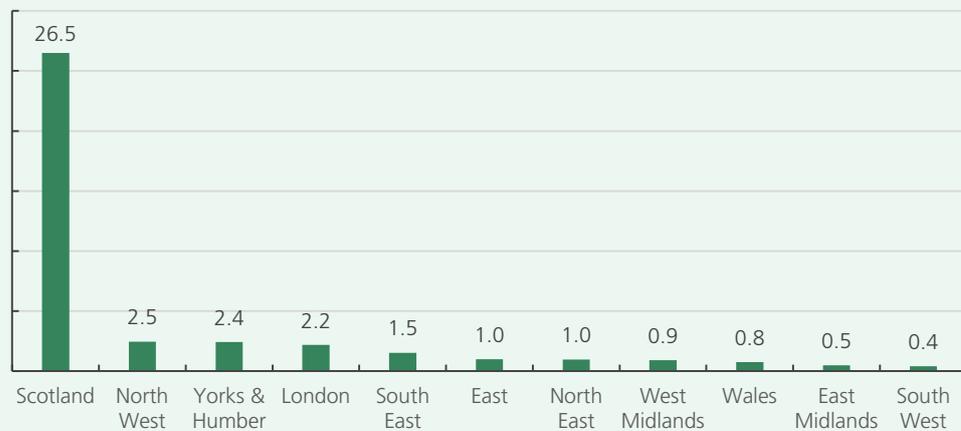
⁹ Oil and Gas UK, [Workforce report 2019](#), p10. Direct employment is people employed in companies extracting oil and gas, and associated services. Indirect employment is people employed in supply chains supporting the industry.

¹⁰ Oil and Gas UK, [Workforce report 2019](#), p11

¹¹ ONS, *Business register and employment survey*, 2019, via [NOMIS database](#). Standard Industrial Classification codes, 06, 09.1, 19.2

Employment in the oil and gas industry, 2018, ONS data

Thousands; Includes extraction, support and refining



ONS, *Business register and employment survey*, 2019, via [NOMIS database](#). Standard Industrial Classification codes, 06, 09.1, 19.2

Employment based in Scotland dominates this industry – 68% of all employment in the industry, or 26,500 jobs are based in Scotland. The next biggest country or region is the North West of England with 2,500 people employed in the industry, 6% of the industry's employment.

Box 1: Employment in the onshore oil and gas industry

The Oil and Gas UK figures and the ONS figures of employment in the oil and gas industry do not distinguish between jobs that support that extraction of offshore or onshore oil and gas. Some of the employment in the data above may be in the onshore oil and gas extraction industry.

Some studies have been carried out which speculate about the potential of the onshore industry. For example, a [report published in 2013](#) by the Institute for Directors suggested that shale gas production from 100 shale gas 'pads' in the UK *could* support 74,000 jobs. This figure is an estimate of potential future employment in a very new and small industry. It is based on a number of assumptions that could be challenged, and uses data from five years ago meaning it may be out of date.¹²

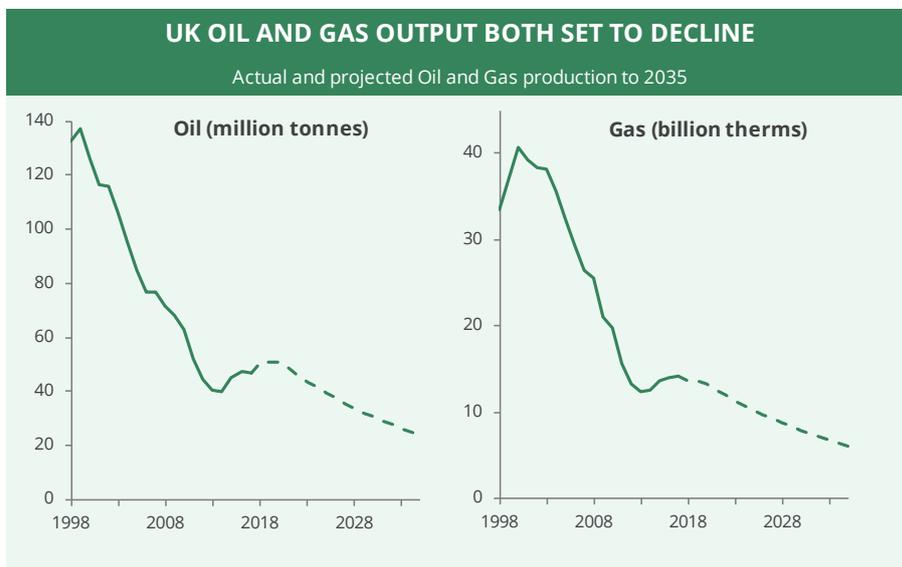
¹² Institute of Directors, [Getting shale gas working](#), May 2013, p17

1.5 Projections for future production

Production in the offshore industry was at its peak in the 1980s. The Office for Budget Responsibility's most recent Fiscal sustainability report (2018), predicted a "long-run decline" in production from the UK continental shelf:

Oil and gas revenues are likely to be affected as production continues its long-run decline. The path of revenues will be dependent on volatile oil and gas prices but we expect declining production from the UK Continental Shelf as it moves towards its ultimately recoverable capacity.¹³

The Oil and Gas Authority (OGA – the industry regulator) also believe the UK's oil and gas production will re-enter decline following a slight recent upturn. This is shown in the charts below (which refer only to the offshore industry). They project that the downturn in output will continue long term.¹⁴



Source: [Oil and Gas Authority, Production and Expenditure projections October 2019](#)

1.6 Tax revenue from oil and gas

In recent years, revenue from the production of oil and gas has fallen sharply due to "falling production, much lower oil and gas prices and higher tax-deductible expenditure. The rate of petroleum revenue tax and the supplementary charge have also been cut substantially."¹⁵ Revenue increased in 2017-18 and 2018-19 for the first time since 2011-12.

The following chart shows revenue from oil and gas since 1979/80. Revenue peaked in 2008/09 at £12.4 billion. In 2018/19 revenue from oil and gas was £1.2 billion.¹⁶

¹³ Office for Budget Responsibility, *Fiscal sustainability report*, July 2018

¹⁴ Oil and Gas Authority, *Projections of UK Oil and Gas Production and Expenditure*, March 2018

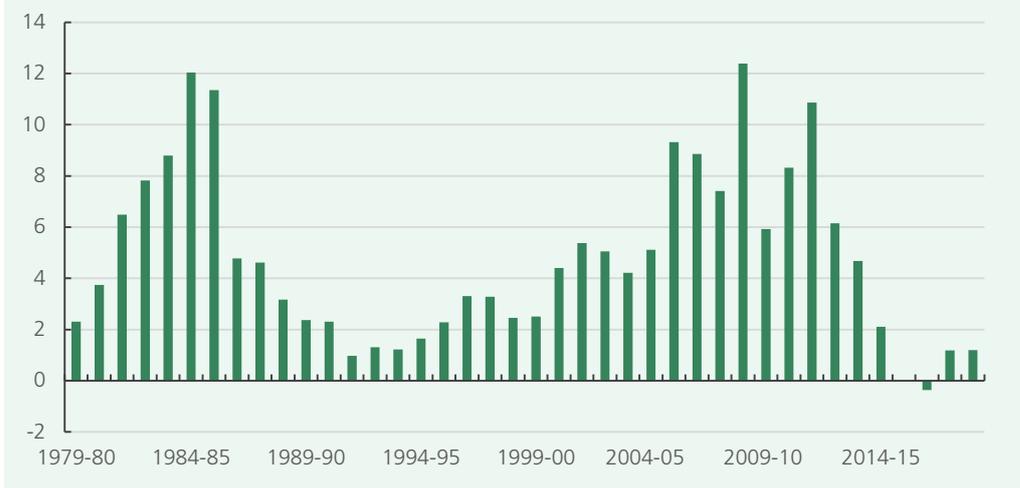
¹⁵ Office for Budget Responsibility, *Oil and gas revenues*, 2018

¹⁶ Data are from HMRC, *Oil and gas revenue statistics, Table 11.11*.

The figure in 2016-17 was the lowest since records began in 1968-69. Negative revenue in 2015-16 and 2016-17 meant that the cost of tax repayments for losses, particularly from decommissioning, exceeded any revenue raised from the profits of oil and gas producers.

Total revenues from oil and gas production

£ billion



Source: HMRC, [Oil and gas revenue statistics, Table 11.11](#), excludes gas levy

In [Budget 2016](#) the Chancellor of the Exchequer announced reductions in taxation for North Sea oil and gas fields to maximise economic recovery of the North Sea. The Budget included commitments to:

- *effectively abolish Petroleum Revenue Tax* by permanently reducing the rate from 35% to 0%, to simplify the regime for investors and level the playing field between investment opportunities in older fields and infrastructure and new developments. The change took effect from 1 January 2016.
- *reduce the Supplementary Charge* from 20% to 10%, to send a strong signal that the UK is open for business and in recognition of the exceptionally challenging conditions that are currently facing the sector. The change will take effect from 1 January 2016.¹⁷

These changes were implemented in the [Finance Act 2016](#).

In [Autumn Budget 2017](#), the Government focussed on decommissioning costs and announced it would bring forward legislation to introduce a mechanism for transferable tax history. Tax relief on decommissioning costs is linked to tax payment history so the new mechanism would allow tax history to be transferred along with the asset.¹⁸

The Government also announced in the Autumn Budget 2017 that they would consult on reducing tax for decommissioning costs incurred by the previous license holder. These changes were introduced in the [2018](#)

¹⁷ HM Treasury [Budget 2016](#), 16 March 2016, page 54

¹⁸ HM Treasury, [Autumn Budget 2017](#), 22 November 2017

[Budget](#), alongside amendments to the Petroleum Revenue Tax rules to “simplify the way of fields can be sold to new investors.”¹⁹

1.7 Government policy

Offshore

The policy of successive Governments has been to maximise economic recovery of the resources in the UK Continental Shelf.²⁰ This policy was specifically recommended in a review by Sir Ian Wood on the recovery of oil and gas from the UK continental shelf, published in February 2014.²¹

Successive Governments have made changes to the tax regime to incentivise investment in the North Sea to facilitate the policy of maximum economic recovery of the resources (see section 1.6 above).

Further information is available from the Library briefing paper on [UK offshore oil and gas industry](#) (March 2017).

Onshore

Onshore hydraulic fracturing (fracking) for shale gas has been the focus of much Parliamentary debate. For information on other aspects of onshore production, Members can contact Library staff.

On 2 November 2019, the UK Government announced that it would take a presumption against issuing any further consents for Hydraulic Fracturing in England.²² The Government decision was taken on the basis of an interim report by the Oil and Gas Authority which found that it is not currently possible to accurately predict the probability or magnitude of earthquakes linked to fracking operations.²³ This means that exploratory work to determine whether shale could be a new energy source has been “paused”. The Government press release confirmed that this position would be maintained unless compelling new evidence is provided.

All the main opposition parties²⁴ (Labour, Scottish National Party, Liberal Democrats, and the Green Party) are opposed to fracking. Similarly, each of the devolved Administrations have planning measures in place which prevent or create a presumption against unconventional oil and gas development (which includes shale gas).^{25,26,27}

¹⁹ HM Treasury, [2018 Budget](#), 29 October 2018, page 70

²⁰ The regulation and licensing of offshore energy is a reserved matter.

²¹ Wood Review, [UKCS Maximising Recovery Review: Final Report](#), 24 February 2014.

²² Gov.uk press release, [Government ends support for fracking](#), 2 November 2019 [accessed 7 November 2019]

²³ OGA, [Preston New Road – PNR 1Z – Hydraulic Fracturing Operations Data](#) [accessed 7 November 2019]

²⁴ Carbon Brief, [Election 2019: What the manifestos say on energy and climate change](#), November 2019

²⁵ Northern Ireland [Strategic Planning Policy Statement](#) (SPPS) para 6.157

²⁶ Gov.scot, [Ministerial Statement: unconventional oil and gas](#), 3 October 2019

²⁷ Gov.wales, Cabinet statement, [Written Statement: Petroleum Extraction Policy statement](#), 10 December 2018

1.8 The future of UK oil and gas

In February 2019, the House of Commons Scottish Affairs Committee published its sixth report of the 2017-19 session on '[The future of UK oil and gas industry](#)'. This summarised the changes that the oil and gas industry is undergoing:

- The drive to maximise economic recovery of the remaining petroleum from the UK Continental Shelf (UKCS). It is estimated that there is between 10 to 20 billion barrels of oil equivalent (boe) of reserves remaining in the UKCS. However, the recovery of remaining reserves is becoming more difficult as the larger and easier to access reserves have been depleted;
- The need to prepare for increasing decommissioning activity in the UKCS, to reduce the cost of decommissioning and to build on Scottish engineering expertise to increase the sector's share of the global decommissioning market.
- The need to strengthen the UK supply chain and diversify its customer base by increasing its exports of goods and services to other markets and sectors; to help ensure a future for the sector beyond oil and gas production in the UKCS;
- To adapt to the need to reduce the industry's carbon footprint, and find opportunities to use the sector's skills, technology and engineering knowledge to deliver a low carbon economy.²⁸

To address these, and other future challenges, the oil and gas industry developed '[Vision 2035](#).' This is a plan jointly led by the trade body, Oil & Gas UK, with support from the industry regulator, the Oil and Gas Authority. The industry webpage set out details of the Vision 2035 campaign:

Vision 2035 outlined our ambition to meet as much of the UK's oil and gas needs from domestic resources and doubling supply chain opportunities at home and abroad to, in turn, deliver exciting jobs, security of supply and, through the energy transition, a lower carbon future.²⁹

After consultation with companies and others, the industry then set out 'Roadmap 2035', which the industry states took into account the feedback received and an accelerated approach to net-zero emissions. The Roadmap includes targets under a number of themes, including:

- helping meet UK energy needs;
- developing people and skills;
- growing the economy and exports;
- supporting net zero and;
- driving technology and innovation.³⁰

²⁸ House of Commons Scottish Affairs Committee, [The future of the oil and gas industry](#), Sixth Report of Session 2017-19, 4 February 2019

²⁹ UK Oil and Gas Industry Association webpage; [Energy Vision 2035](#) [accessed 19 February 2020]

³⁰ Energy Vision 2035 webpage, [Roadmap 2035](#). A blueprint for net zero [accessed 19 February 2020]

A Sector Deal?

The May Government published an [Industrial Strategy](#) in November 2017. The strategy includes Sector Deals for a number of different industries which are intended to “drive transformation in investment and productivity across the economy”. While Sector Deals with several sectors, such as Aerospace, Nuclear, and Offshore wind³¹, have since been announced, there is at present no Sector Deal for the oil and gas industry. During its inquiry, the Scottish Affairs Committee was told by Oil and Gas UK that key to achieving Vision 2035 was a Sector Deal with the Government. On the Sector Deal proposal, the Committee was told:

The sector deal proposal estimates that a total investment of £176 million can deliver up to £110 billion of potential value between now and 2035 (which is 38% of the total identified in the industry’s Vision 2035).³²

The Committee concluded that the Government should work towards an oil and gas Sector Deal:

We support the proposals for an oil and gas sector deal which we believe is an ambitious and timely plan of action to strengthen an industry which is so vital to Scotland and the UK’s economy and energy supply. A sector deal would support Scotland’s oil and gas industry through a time of change; cementing its place as a global leader while it responds to new challenges. [...]

We recommend that the UK and Scottish Governments work with the sector to convert the ambition and vision of the sector deal into a plan that will deliver the significant benefits it envisions and prepares the sector for future challenges. There are some areas where we believe the industry could be more specific or ambitious in the commitment it is making in return for this investment.³³

The May Government’s [response](#) to the report said it shared the committees “desire to support the sector” but suggested there may not necessarily be a formal deal:

We have been clear that any Sector Deal must meet the expectations set out in the Industrial Strategy White Paper and be a catalyst for transformation.

The sector has already benefited from a significant early ‘Sector Deal’ in the form of the Wood Review, which led to the creation of the Oil and Gas Authority (OGA) and the Maximising Economic Recovery (MER) UK Strategy. On top of this, the industry has already received unprecedented support from this government, including: fiscal changes to the tax regime worth £2.3bn; the Aberdeen City Region Deal (with £180m for a new Oil and Gas Technology Centre, co-funded with the Scottish Government); support for exploration worth £45m; and new arrangements to support the transfer of tax history, with the objective of boosting investment into the UKCS.

We have welcomed the work that has been led by Trevor Garlick on the industry’s proposal for a new Sector Deal, which is closely

³¹ Gov.uk, [Introduction to Sector Deals](#), 28 June 2019

³² House of Commons Scottish Affairs Committee, [The future of the oil and gas industry](#), Sixth Report of Session 2017-19, 4 February 2019, para 13

³³ House of Commons Scottish Affairs Committee, [The future of the oil and gas industry](#), Sixth Report of Session 2017-19, 4 February 2019, para 20 and 21

aligned to Vision 2035; a vision that this government supports. [...] It is unlikely that this would have happened without the Sector Deal process and we are keen to keep this engagement going as certain elements of the proposal are delivered whilst others continue to take shape.

Some of the five areas of focus in your report are already being taken forward without a formal Sector Deal. Others are still in the development phase and we are committed to engaging with the sector as these proposals take shape, particularly on underwater engineering and exporting the sector's expertise. Industry has pragmatically suggested that this will be in a phased approach rather than necessarily as a formal deal.³⁴

The Johnson Government have since suggested that it is working towards a Sector Deal:

The UK's offshore oil and gas industry supports almost 300,000 jobs, of which four in ten are in Scotland. We believe that the North Sea oil and gas industry has a key role to play as we move to a Net Zero economy. We will support this transition with a transformational oil and gas Sector Deal. BEIS officials have already held preliminary discussions with industry to discuss how such a Sector Deal could enable the sector to play a leading role in the energy transition. Discussions will develop further over the next few months, as the process develops.³⁵

³⁴ House of Commons Scottish Affairs Committee, [The Future of the Oil and Gas Industry: Government Response to the Committee's Sixth Report](#), 9 May 2019

³⁵ PQ6177, [Offshore Industry](#), 28 January 2020

2. News items

FT [subscription]

New BP boss Bernard Looney pledges net zero carbon emissions by 2050

12 February 2020

<https://www.ft.com/content/e1ee8ab4-4d89-11ea-95a0-43d18ec715f5>

Offshore Technology

OGUK sets out plans to decarbonise the UK oil and gas industry

31 January 2020

<https://www.offshore-technology.com/news/oguk-sets-out-plans-to-decarbonise-the-uk-oil-and-gas-industry/>

Energy Voice

'Decaf gas' can help to tackle climate change

30 January 2020

The debate around fossil fuels and the impact on climate change is getting increasingly polarised. What we urgently need is a more informed debate based on facts and evidence.

<https://www.energyvoice.com/oilandgas/north-sea/221107/decaf-gas-can-help-to-tackle-climate-change/>

Independent

UK funding overseas fossil fuel projects emitting millions of tonnes of emissions, investigation finds

24 January 2020

<https://www.independent.co.uk/environment/climate-change-fossil-fuels-emissions-uk-funding-environment-a9299656.html>

edie.net

Industrial Decarbonisation Champion to steer £20m innovation centre for net-zero transition

Professor Mercedes Maroto-Valer has been appointed as an "Industrial Decarbonisation Champion" to oversee the development of a £20m research and innovation centre at Edinburgh's Heriot-Watt University that will drive the delivery of the UK's net-zero emissions target.

23 January 2020

<https://www.edie.net/news/6/Industrial-Decarbonisation-Champion-to-steer--20m-innovation-centre-for-net-zero-transition/>

edie.net

Oil and gas giants must cut production by a third to meet climate targets

The world's largest oil and gas companies must cut combined production by 35% by 2040 if nations are to meet the collective ambitions of the Paris Agreement and limit global warming to below 2C, a new report from Carbon Tracker has found.

1 November 2019

<https://www.edie.net/news/6/Oil-and-gas-giants-must-cut-production-by-a-third-to-meet-climate-targets/>

BBC News Online

Climate change: Oil industry argues for maximum production levels

4 September 2019

<https://www.bbc.co.uk/news/uk-scotland-49565953>

Guardian

UK's biggest carbon capture project is step-change on emissions

27 June 2019

<https://www.theguardian.com/environment/2019/jun/27/uks-biggest-carbon-capture-project-is-step-change-on-emissions>

3. Press releases

Oil and Gas UK

UK oil and gas industry outlines transition plans

January 30, 2020

The leading representative body for the UK's offshore oil and gas industry today outlined the details of its response to UK and Scottish Government net zero commitments in a [keynote speech](#) delivered by OGUK Chief Executive Deirdre Michie OBE.

Oil and Gas Authority

OGA Chairman challenges the sector to respond to the energy transition challenge

16 January 2020

The Chairman of the Oil and Gas Authority (OGA) said that the oil and gas industry's 'social licence to operate' is under serious threat and there is no scope of a second chance, adding that it must do more to help solve the challenges of climate change and the drive to net zero.

Tim Eggar addressed a group of senior industry leaders at a meeting of the [MER UK Steering Group](#) in Aberdeen on 15 January. He called on industry to act much faster and go farther in reducing its carbon footprint. Ahead of the COP26 climate conference later this year, he suggested industry would need to develop a package of measures, including:

- The offshore industry to commit to clear measurable greenhouse gas targets, with real progress on methane.
- To show progress on carbon capture and storage, including work having started on major projects.
- Measurable progress on energy integration opportunities – for example, an electrification project.
- An acceleration of the move to ensure there is a diverse array of skills and people for the long-term energy offshore and supply industry.

He also outlined the OGA's priority areas going forward and how the OGA will integrate the UK's net zero ambitions across its core business.

[Speech Transcript](#)

Oil and Gas UK

OGUK responds to OGA energy transition challenge

January 16, 2020

The Chairman of the Oil and Gas Authority has challenged the UK oil and gas sector to respond to the energy transition. Commenting, Deirdre Michie, Chief Executive OGUK said:

We are an industry in action. Roadmap 2035: a blueprint for Net Zero is one of the first major industrial responses to government plans to reduce or offset carbon emissions to net zero by 2050 in the UK and 2045 in Scotland.

We will continue to work closely with all industry regulators including the OGA to deliver a safe, sustainable and competitive industry that realises its full potential in the transition to the low carbon future we all want to see.

Lloyds of London

Net-zero emissions: oil and gas decarbonised.

10 Jan 2020

What does the UK's 2050 commitment to net-zero carbon emissions mean for oil & gas? Read our blog on the opportunities nationally and beyond for a low-carbon world.

'Put a tiger in your tank.' - The public face of oil and gas looks very different today from the end of the last century, when this popular slogan reappeared. The UK's 2050 commitment to net-zero carbon emissions will spur wider change, creating new sources of energy and new opportunities. Whilst as an industry, we can't shy away from our responsibility to operate in a more sustainable manner, there has been misleading messaging and information that unfairly puts much of the blame for manmade climate change on the oil and gas sector.

The UK is the first of the G7 group to legally commit to reaching net-zero carbon emissions by 2050. Net zero means no greenhouse gas emissions or those generated being balanced by offset schemes. By amending the Climate Change Act, and leading the Paris pact, the impetus moves to exploring all greener energy options.

It is well known that many of the ways in which we sustain our economies, well-being and life, has an impact on the environment and the world is full of unintended consequences. In 1894, for example, cities were saved from the horse manure crisis that killed tens of thousands of people, by a booming automobile industry, which in turn emitted smog, carbon monoxide, and other toxins. In an effort to make the automotive industry greener, electric cars were introduced, however mining minerals such as cobalt, lithium and nickel is a high intensity process not without its unintended impact on health and the environment.

The reality is that the UK will need its Oil and Gas resources today, tomorrow and beyond 2050. On the energy argument alone, renewable

technologies have some way to go, especially with storage. When the wind stops blowing, a nation still demands power and increasingly so. The nuclear energy route is expensive, with several perceived barriers to further development. Then, there are the essential by-products of the petroleum industry to consider. From fertilizer to flooring, insecticides to perfume, and our pharmaceuticals. Aspirin, anybody?

Opportunities alongside the challenges

Whilst decarbonisation can seem complex, solutions for oil and gas are emerging. The industry has a clear role to play in moving towards a low-carbon economy.

It is essential to consider not only moving to renewable sources of energy, but also how to decarbonise. The industry has a significant target for reducing its emissions by at least 3.4 gigatons of carbon dioxide equivalent (GtCO₂e) a year by 2050 ([McKinsey, 2020, The Future is now: How oil and gas companies can decarbonize, January, 2020](#)), according to McKinsey, there are three approaches the industry could consider. The first is optimizing its operations which require few process changes and results in a reduction of intermittent flaring, venting and fugitive emissions. The second involves implementing sustainable design choices which have a positive economic benefit. Finally, producers should start to re-balance their portfolios across the spread of emission intensity therefore preparing for possible risks from future policy scenarios and investment choices. ([McKinsey, 2019, Toward a net-zero future: Decarbonizing upstream oil and gas opportunities](#)).

Furthermore, according to McKinsey these approaches will depend on a range of factors such as, geography, asset mix (offshore versus onshore, gas versus oil, upstream versus downstream), and local policies and practices (regulations, carbon pricing, the availability of renewables, and the central grid's reliability and proximity)

As a technical specialist, Lloyd's Register is committed to supporting the energy industry with its green initiatives. Recent work includes an in-depth, cross-disciplinary study for the Oil and Gas Authority (OGA). The UKCS 'Energy Integration' report explores upstream opportunities in UK waters to cut greenhouse gas emissions. This includes current possibilities through platform electrification and wider opportunities, which go beyond the now to support the UK's 2050 pledge. Solutions include marrying oil and gas infrastructure and depleted fields with evolving carbon capture and storage (CCS) technology; costly at the moment, but may become less expensive in the future. The future may even see the industry move into hydrogen production and storage, or be part of integrated energy hubs with offshore wind farms. Cross-sector collaboration is key to future success.

These recommendations shouldn't be restricted to the UK Continental Shelf, but explored globally. Speed is of the essence and many of these greener solutions must be embraced over the next decade or so to see a return on investment over a field's remaining life. However, for large-scale projects or where fresh collaborations are possible these new ideas

need to be built into field development plans. Rapid change will be required along with investment if businesses are to be successful.

The investment market and shareholders will increasingly place sustainability first as 2050 approaches, and it is this focus which will drive the Oil and Gas sector to effectively support the creation of a cleaner more sustainable future for generations to come.

Oil and Gas UK

Industry report calls for urgent action to progress UK carbon capture and storage

December 3, 2019

A comprehensive report into the changing energy landscape has called for urgent action to progress low carbon technologies critical to the UK and Scottish Government's net zero ambitions.

It says government and industry must work together to progress to the next stage five key projects across the UK which look to capture, transport and store carbon dioxide from heavy emitting industrial processes including power plants. It also calls for joint action to increase the potential for low carbon hydrogen to be used as a fuel to heat homes and power cars.

The policy recommendations are published today by the leading representative body for the oil and gas sector, OGUK, in its second [Energy Transition Outlook Report](#). The document considers the changing energy landscape in the UK and outlines progress achieved by the UK's oil and gas sector over the past year to provide industry and economy-wide solutions towards reducing emissions.

However, the report authors warn that the sector will need to earn its position in the changing energy world, with rapid action required to ensure the sector transforms over the next 30 years while continuing to meet as much of the UK's oil and gas needs from domestic resources.

The report findings show:

- The UK's oil and gas industry is in a unique position to lead in the development of Carbon Capture Usage and Storage, with 5 projects situated across the country currently being explored
- UK energy sector investment will need to double in order to achieve a decarbonised economy

Commenting on the report, OGUK Chief Executive Deirdre Michie said:

Our Energy Transition Outlook report shows the changing energy landscape in the UK and the opportunities and challenges it presents all industries, businesses and people, our own included.

With the launch of Roadmap 2035: a blueprint for net zero, we were one of the first industrial sectors to set out credible plans to support the UK and Scottish Government net zero emissions. Yet the oil and gas sector will have to earn its position in this new

energy world, cutting its own emissions and working with governments and regulators to progress the five CCUS projects which now need to move forward into the next phase and developing hydrogen.

As our report shows, there is lots of work to be done in a huge market which is only getting bigger as global demand for energy continues to grow. The Climate Change Committee report published at the beginning of this year noted CCUS was critical to our net zero ambitions. Our challenge, working with others including the OGTC's Net Zero Solutions Centre, is to realise CCUS and other low carbon technologies as an opportunity for British businesses.

Oil and Gas Authority

Offshore energy integration in the UK a step closer

17 December 2019

Innovative partnering between oil and gas, renewables, hydrogen and carbon capture can accelerate energy transition

Integrating the UK offshore energy sector, including closer links between oil and gas and renewables, can reduce carbon emissions from oil and gas production and longer term actively support delivery of the UK's net zero target through technologies such as carbon capture and storage (CCS). This is the conclusion drawn in the "[UKCS Energy Integration: Interim Findings](#)" report, published today, 17 December 2019, by the Oil and Gas Authority.

The interim report discusses the first phase of the UKCS Energy Integration project which is led by the OGA, working with BEIS, The Crown Estate and Ofgem, considering options to help feed into a new strategic vision of the UKCS as an integrated energy basin. The project is funded by a grant from the Regulators' Pioneer Fund.

The project considers how oil and gas infrastructure and capabilities can be leveraged for CCS, and to support renewable energy production and hydrogen generation, transportation and storage.

The report finds that multiple offshore integration concepts are technically feasible and would be viable options for helping to lower the oil and gas industry's carbon footprint and decarbonising the UK economy.

The report emphasises that opportunities for UKCS deployment are plentiful, diverse and location-specific. Additionally, the UK has significant wind power potential, untapped carbon storage capacity, and extensive oil and gas infrastructure in place. All the concepts discussed in the report can reduce carbon dioxide emissions but differ in terms of scalability and timeline.

The concepts discussed in the report are as follows:

- *Platform electrification* could significantly reduce emissions on oil and gas installations by using low-carbon electricity, including directly from offshore wind farms, to replace generation from

gas and diesel. Technology for platform electrification has been proven and could enable near-term emissions reductions for the oil and gas industry.

- *Gas-to-wire (GtW)* may enable gas to be converted to electricity offshore and transported using existing windfarm cables. In terms of technical feasibility, individual elements are proven, but it is a niche solution suited, particularly, to the Southern North Sea (SNS) and East Irish Sea (EIS). GtW can be combined with CCS to avoid the incremental CO₂ emissions.
- *CCS* has already been piloted offshore and is considered essential in all UK decarbonisation scenarios, not just to decarbonise the power sector but also to enable deep cuts from other sectors, including industry. The storage potential across the UKCS and opportunity for oil and gas synergies is very significant.
- *Hydrogen* has feasible production avenues through both 'blue' hydrogen (produced by natural gas reforming) and 'green' hydrogen (electrolysis produced by renewables) routes, enabling decarbonisation of power, heat and transport. The offshore energy sector – both oil and gas and renewables – offer significant production, storage and transport potential, for example through the repurposing of offshore oil and gas infrastructure and offshore electrolysis, with transportation in re-used pipelines.
- Offshore *energy hubs* can help scaling up net-zero energy solutions, e.g. by allowing hydrogen to be generated offshore using windfarms and stored in reservoirs to be transported to shore using oil and gas infrastructure. Multiple sites across the UK would be suited to energy hubs.

The OGA fully supports the energy transition and welcomes the government's legally binding commitment to net zero emissions by 2050. The OGA understands why there could be concern about UK domestic production of oil and gas in this context. However, oil and gas will remain an important part of our energy mix for the foreseeable future, including under net zero scenarios, where the UK is still expected to be a net importer. As such, managing the declining production and maximising the economic recovery from the UK remains vital to meet those energy demands as long as they exist, and to reduce reliance on hydrocarbon imports.

Andy Samuel, Chief Executive of the OGA said:

The energy transition and the UK's drive to net zero requires the oil and gas industry to embrace energy efficient operations, whilst supporting the growth of CCS, offshore renewables, and hydrogen. Our report highlights the wide range and combination of solutions that can play a part, in line with the Committee for Climate Change's recommendations. Phase II is well underway, focusing on regulatory and economic aspects and we look forward to working closely with industry and government in enabling action through 2020 ahead of COP 26.

Phase 1 of the project was completed by global consultancy, Lloyd's Register (LR). Ali Kerlogue, LR's expert voice on Energy Integration said:

As an industry, the approach we're taking in developing sustainable energy sources has made significant strides in the last 12 to 18 months. The OGA's report identifies the solutions that will help drive the transition to an energy mix that embraces renewable sources using existing oil and gas infrastructure, the concepts of which can be used anywhere in the world not just the UKCS.

The OGA has appointed EY to support delivery of phase two of the project, which consists of an economic and regulatory assessment, to identify barriers, opportunities and quick-wins. The project will conclude in Q2 2020, after which a final report will be published.

Notes to editors:

- This report provides interim findings from phase 1 of the OGA's Energy Integration Project, and comprises a scoping study undertaken by Lloyd's Register to consider the technical feasibility of oil and gas assets, combined with renewable sources, to enable the transition to a low carbon economy. It reviewed five technology concepts: platform electrification, carbon capture and storage (CCS), gas-to-wire, hydrogen and energy hubs.
- The report summarises the findings from Phase 1 (technical assessment) of the UKCS Energy Integration project. The project is being led by the OGA in collaboration with the Department for Business, Energy and Industrial Strategy (BEIS), The Crown Estate and Ofgem, following a grant awarded by the Better Regulation Executive's Regulators' Pioneer Fund in March 2019.
- Eight stand-alone business models were identified from the technologies reviewed including both brownfield and greenfield options, which will form the basis of phase two of the project.
- Administered by Innovate UK on behalf of the Better Regulation Executive, a unit of the Department for Business, Energy and Industrial Strategy (BEIS), the Regulators' Pioneer Fund supports initiatives that help bring innovative products and services to market. The fund aims to support bodies to drive forward innovation in the public sector and unlock the economic opportunities of the four Grand Challenges set out in the government's Industrial Strategy: artificial intelligence and data, an ageing society, clean growth, and the future of mobility.
- The OGA fully supports the energy transition, as set out in its [policy position](#). It also regulates offshore carbon dioxide storage, and is the licensing authority, approving and issuing storage permits and maintaining the carbon storage public register.
- The OGA has also published [a podcast](#) on The Energy Transition, where Chief Executive Andy Samuel debates this important issue with leading industry figures.

Oil and Gas Technology Centre

Industry and Governments back new Net Zero Solution Centre at OGTC

03 September 2019

- Accelerating technologies to help the UKCS become a net zero carbon oil and gas basin
- Supported by industry including BP, Chrysaor, Shell, Wood, Aker Solutions and Ineos
- UK and Scottish Governments welcome exciting new Centre

The Oil & Gas Technology Centre has today announced it will create, in partnership with industry, a new Net Zero Solution Centre to accelerate the development and deployment of technologies to decarbonise offshore operations and develop the UKCS as the first net zero oil and gas basin globally, supporting the industry's Roadmap 2035.

The new centre has the backing of major companies including BP, Shell, Wood, Chrysaor, Aker Solutions, INEOS, CNOOC International, Total, Siemens and Equinor, who recognise the critical contribution the oil and gas industry can make to the net zero economy, while continuing to meet demand from UK homes and businesses.

Earlier this year, the UK and Scottish Governments set binding net zero carbon targets, for 2050 and 2045 respectively. This followed the publication of a comprehensive report by the Committee on Climate Change, which identified growing demand for oil and gas and the need for immediate action to address growing emissions while balancing the needs of the UK economy.

The Net Zero Solution Centre will work with government and industry to address the UK offshore oil and gas industry's emission footprint, while also developing technologies that will contribute to the growing demand for hydrogen production and carbon sequestration. This evolution of the industry, repurposing of facilities and partnering with companion industries such as renewables, will create a new future for the UKCS, while also supporting the creation of net zero carbon economy.

To transform the UKCS into a net zero oil and gas basin, the Centre will champion the creation of an integrated offshore energy system, partnering with companies to accelerate the development of carbon capture, utilisation and storage, hydrogen capability and other net zero technologies.

The Centre has developed a roadmap and will work with a range of academia institutions and industry sectors to identify shared challenges and lead cross-sector collaboration on technologies to help accelerate carbon reduction and create export opportunities for the UK supply chain.

Launching the Net Zero Solution Centre at Offshore Europe 2019, Colette Cohen, CEO of the Oil & Gas Technology Centre said:

The UK offshore oil and gas industry is a dynamic system of infrastructure, supply chains, expert workforce, research activity and technology development and deployment. This diverse industrial ecosystem must play a fundamental role in the creation of a net zero carbon economy.

With the backing of industry and government, and strong track of delivery, the OGTC is committed to moving the dial on carbon reduction and enabling the UK Continental Shelf to become the first net zero hydrocarbon basin in the world.

Our focus will be on developing technologies to reduce operational carbon emissions, working with other parts of the energy sector to create integrated solutions and repurposing infrastructure to accelerate carbon capture usage and storage, hydrogen production and gas-to-wire capacity.

We're delighted to be working with a strong group of companies and look forward to adding new strategic partners to the Net Zero Solution Centre over the coming months.

Scotland's Minister for Energy, Paul Wheelhouse, said:

We welcome the Oil & Gas Technology Centre's plans and look forward to working with them to establish a new Net Zero Solution Centre. The Centre supports the sector's ambition to become the first net zero hydrocarbon basin in the world, a key element of a sustainable, secure and inclusive energy transition.

UK Minister of State for Energy and Clean Growth, Kwasi Kwarteng, said:

The UK's oil and gas sector has a pivotal role to play in the UK's journey towards becoming a net-zero economy by 2050. Support from companies within the industry is vital to us making this energy transition to a greener future.

The UK Government warmly welcomes this initiative to find innovative technological solutions to decarbonising the offshore production of gas and oil from the North Sea and wider UK Continental Shelf.

Cllr Jim Gifford, leader of Aberdeenshire Council and chair of the City Region Deal Joint Committee said:

When this 'net zero' ambition was discussed at our committee just last week, every member around the table, from the public and private sector, shared the enthusiasm for the importance of this solutions centre. There is a real gear-change evident across the sector at the moment, with companies large and small pushing their climate transition ambitions up a level.

The City Region Deal partners are working on what we can do, individually and together to further our own energy transition ambitions and this announcement feels like a real milestone towards that.

Councillor Jenny Laing, Co-Leader of Aberdeen City Council and Vice-Chair of the Aberdeen CRD Joint Committee, said:

Today's announcement is an important step on our City Region Deal journey, with partners working together towards goals that are not only of regional significance but of global importance.

Innovation is a central theme running through the core of the CRD projects and this is another example of Aberdeen demonstrating its pioneering approach, embracing opportunities to evolve by harnessing the expertise and knowledge that has been the bedrock of our success to date.

The Net Zero Solution Centre will be a game changing development. Aberdeen City Council's environmental responsibilities are of paramount importance and we are committed to continuing to play a leading role in addressing climate change. We have statutory responsibilities in that respect, but our commitment goes far beyond that and we are proud to be supporting this project.

Sir Ian Wood KT, GBE, Chairman of Opportunity North East said:

I believe the North East of Scotland is on its way to becoming a global energy capital, applying our significant oil and gas capabilities and innovative technologies to reduce carbon emissions. We have the skills, knowledge and strong track record to convert the challenge of climate change into an opportunity, creating new technical solutions in the UK and globally.

The Oil & Gas Technology Centre's new Net Zero Solution Centre can make a significant contribution, partnering with industry to help deliver low carbon solutions and support the creation of a net zero carbon economy.

Andy Samuel, Chief Executive of the Oil and Gas Authority said:

The OGA warmly welcomes this important step forward. We believe the oil and gas industry, with its long history of engineering excellence, infrastructure, subsurface expertise and world-class supply chain, should play a leading role in the drive to Net Zero. We're excited by the opportunities to use technology to enable carbon capture and storage, offshore energy integration and hydrogen production, while we maximise economic recovery from the UKCS to meet continuing energy demands and reduce reliance on hydrocarbon imports.

The Net Zero Solution Centre will be officially launched at 1245 on Tuesday 3 September at Offshore Europe 2019 during a leadership panel discussion on the OGTC stand. Colette Cohen will be joined by Sian Lloyd-Rees, Head of UK and SVP Europe & Africa at Aker, Ariel Flores, Regional President of BP North Sea, Phil Kirk, CEO of Chrysaor and Geir Tuft, CEO of Ineos Oil & Gas.

The project programme for the Net Zero Solution Centre is now being developed with our industry partners and recruitment is ongoing for a Manager to lead the new centre. The first few projects are likely to be announced by the end of 2019, alongside a high-level plan for 2020.

Sian Lloyd-Rees, Head of UK and SVP Europe & Africa at Aker said:

This is positive news for the energy sector as we have a role to play in delivering the net zero target for the UK. We've seen an increase in the pace and nature of the discussion and the OGTC's NetZero Solution Centre is a welcome focal point and catalyst for our progression towards a lower carbon economy

Steve Phimister, Vice President Shell UK Upstream said:

We believe this Centre, working with companies like Shell, can make a difference and assist the industry in delivering the UK's

targets on emissions reduction and in moving towards a Net Zero Carbon basin.

Ariel Flores, Regional President, BP North Sea said:

BP is a significant supporter of the OGTC through our participation in the existing solution centres and funding of the TechX technology accelerator programme. The Net Zero Solution Centre aligns well with our strategy to reduce emissions in our own operations, improve our products and create low carbon businesses.

Ray Riddoch, UK MD and SVP Europe and Africa for CNOOC International, said:

CNOOC International is delighted to support the new Net Zero Solution Centre. It is essential that industry, academia and government work together on new technologies and solutions that can help turn the dream of a net zero oil and gas industry into reality.

Jean-Luc Guiziou, Managing Director of Total E&P UK said:

Climate is at the heart of Total's strategy and we support the creation of the Oil & Gas Technology Centre's Net-Zero Solution Centre. New technologies such as Carbon Capture, Utilisation and Storage are going to be essential to the future of energy and the climate. This new initiative from the OGTC is a welcome contribution to meeting that challenge.

Phil Kirk, Chief Executive Officer, Chrysaor

We are an active member of the Oil & Gas Technology Centre, working on multiple projects and field trials. This new clarity of focus on the UKCS carbon footprint aligns well Chrysaor's intent to minimise any negative impact of its business activities. As a result, we are supportive of the creation of the Net Zero Solution Centre and look forward to continuing our collaborative working relationship with the OGTC, industry and government.

OGUK Chief Executive Deirdre Michie said:

This is a clear statement of intent from an industry rooted in finding solutions to some really complex problems, and we look forward to setting out our plans in more detail when we publish Roadmap 2035 later this week. The Net Zero Solutions Centre will help to identify some of the practical steps we can take as we look to net zero, and further establish the UK oil and gas industry as a centre of excellence at a time when the UK is looking for answers.

Dave Stewart, CEO, Wood's Asset Solutions business in Europe, Africa, Asia & Australia said:

As an active member of the Oil & Gas Technology Centre, we are delighted to support the new solution centre which will bring companies and bodies from across the sector together to work towards a net zero carbon basin. The aim of the centre aligns with Wood's focus on developing new technologies, introducing new software and pioneering new commercial models designed to ensure the energy industry is safe, sustainable and committed to delivering Vision 2035.

Steve Scrimshaw, Managing Director, Siemens Gas and Power UK said:

This is an excellent initiative and is much needed. If we are to reach net zero, we need to be able to demonstrate the benefits of new technologies, and to understand how these will all work together to decarbonise our energy mix.

4. Parliamentary material

Statement

Written statement: [Energy Update](#)

HC Deb 22 July 2019 | HCWS1789

Greg Clark: On 27 June, the UK became the first major economy in the world to legislate to reach net zero emissions by 2050.

Achieving this target will require significant changes in the way we produce, deliver and use energy. We will need to harness the power of innovation and new technology to ensure the energy system remains flexible and resilient. We will need to provide confidence to businesses across the country to invest in a greener future by maintaining clear and stable policy frameworks. We will also have to ensure that as we move to cut greenhouse gas emissions across the economy, the security of our energy supplies is never in doubt and energy costs are kept low for all households and businesses.

As we set out on the path to reach net zero emissions, the government is today outlining a series of important reforms across the energy system. These include new approaches to how low-carbon infrastructure is financed, potential changes to the retail energy market so it works better for all consumers, a new strategy for tackling fuel poverty and significant changes to the way we set the detailed rules that govern the energy system.

The action we are taking today is only a first step. Continuous action over the next three decades by successive governments will be required if we are to end the UK's contribution to global warming and inspire the necessary action at a global level.

The government has today published the following public consultations and reviews:

Regulated Asset Base financing model for new nuclear projects

The government committed in January 2019 to publish an assessment of the Regulated Asset Base model as a means of financing new nuclear projects. We are today publishing that assessment as part of a public consultation on the Regulated Asset Base model. The purpose of this consultation is to set out the basis for our assessment and to seek views from a range of interested parties on how it could be implemented within the current energy system in such a way that allows new nuclear to be built at low cost to consumers. The consultation includes a set of core principles that have resulted from our feasibility assessment and considers important issues such as the approach to risk-sharing under such a model. This consultation will be open for responses until 14 October 2019.

Business models for Carbon Capture Usage and Storage (CCUS) projects

As we committed to in the CCUS Action Plan, we are today publishing a consultation on how we can bring CCUS projects to market in the years ahead. This is an important step in order to meet our Action Plan commitment of delivering the UK's first CCUS project from the mid-2020s. The consultation seeks views on possible CCUS business models for industry, power, and carbon dioxide transport and storage, as well as a framework to support hydrogen production with CCUS. The consultation sets out the risks that are inherent in first of a kind CCUS projects, and the possible delivery and coordination challenges of deploying CCUS at scale. This consultation will be open for responses until 16 September 2019.

The re-use of oil and gas assets for Carbon Capture Usage and Storage (CCUS) projects

This consultation fulfils the government commitment in the CCUS Action Plan to identify existing oil and gas infrastructure that has the potential for re-use and to develop a policy to support the development of CCUS in the UK. It seeks views on whether government should introduce a discretionary power for the Secretary of State to remove the decommissioning liability from previous oil and gas asset owners if assets are transferred to CCUS projects; and on changing guidance from the Oil and Gas Authority and government to encourage owners and operators of oil and gas assets to propose a period of suspension prior to decommissioning in circumstances in which there is a reasonable prospect of the asset being acquired by a CCUS project. This consultation will be open for responses until 16 September 2019.

Flexible and responsive energy retail markets

The consultation is issued in partnership with Ofgem and sets out a vision for the future energy retail market, the key challenges which the government and Ofgem wish to address, and the outcomes the retail energy market needs to deliver for all consumers. This includes how the regulatory framework may need to change to facilitate the introduction of innovative products and services that may face barriers today and could support our transition to a greener future. The consultation assesses the case for making reforms which could remove market distortions so as to improve the functioning of the energy retail market as a dynamic and competitive sector. The consultation also outlines how the energy retail market can benefit all consumers, ensuring they are able to secure a fair deal and receive a good level of customer service. This consultation will be open for responses until 16 September 2019.

Reforming energy industry codes

This consultation seeks to address the fact that the way the detailed rules governing the energy system are managed may be frustrating the shift towards a greener future. The consultation suggests creating a new function to translate the government's vision for the energy system into a strategic direction for codes, as well as giving code administrators more power to change codes, ensuring that vision can be delivered. We propose creating a new process that allows for greater agility in how codes and code changes are governed. We also set out an approach

that will ensure we can deliver rules that are clear, accessible and simpler. This consultation will be open for responses until 16 September 2019.

Fuel Poverty Strategy

We are consulting on proposed reforms to the 2015 Fuel Poverty Strategy to ensure that the actions we are taking to support people out of fuel poverty are as effective as possible. This includes a potential change to the way that fuel poverty is measured to ensure that we are able to include all those living in fuel poverty. We also propose making changes to ensure that those most at risk from living in a cold home get the support they need by aligning our fuel poverty policies with medical evidence. We are also proposing a new principle which would ensure that policies contributing to the fuel poverty target are complementary to other government priorities such as the Clean Growth Strategy. This consultation will be open for responses until 16 September 2019.

Capacity Market five-year review and consultation on proposals for Capacity Market emissions limits

We are today publishing a five-year review of the Capacity Market mechanism. This review has found that the scheme is working effectively and performance against the original objectives has been achieved. In considering the future of the scheme, we propose focusing on specific areas of the scheme that will need to change as we maintain security of electricity supply while also moving towards net zero emissions. One of the first steps we propose to take is to implement a restriction on the most polluting types of energy generation, such as coal, within the Capacity Market by introducing new carbon emissions limits. To implement these changes, we are today issuing a public consultation on carbon emission limits within the scheme. This consultation will be open for responses until 2 September 2019.

Facilitating energy efficiency in the electricity system

Increasing our ambition on improving energy efficiency across the UK energy system will be vital if we are to reach net zero emissions. The Electricity Demand Reduction pilot evaluation we are publishing today has concluded that energy efficiency projects are not yet ready to enter the GB Capacity Market. We are therefore publishing a Call for Evidence on market barriers to energy efficiency, and how we can create new markets for energy efficiency and secure its role in the wider energy market. This includes considering how energy efficiency could help reduce the requirement for network reinforcement and help compliment the growth in distributed generation. This Call for Evidence will be open for responses until 25 September 2019.

Funding for advanced nuclear technologies

In addition to the above consultations, we are today announcing that we are developing proposals to invest government money in the creation of innovative small modular reactors (SMRs) which are less expensive to build than traditional nuclear power plants. As stated to this house on 17 January, we have received a proposal from a

consortium of businesses, led by Rolls-Royce, who have proposed a significant joint investment of more than £500m focused on designing a first-of-a-kind SMR. The consortium expects to more than match any Government funding both by direct investment and by raising funds from third party organisations that wish to invest.

The government can today confirm that the Consortium's proposal has been accepted into Wave 3 of the Industrial Strategy Challenge Fund. The Challenge is to design a working model that could be operational by the early 2030s. We are looking to make an initial award of up to £18m to the Rolls-Royce-led consortium in early Autumn 2019. This is subject to final decisions to invest, including business case and other approvals, and this consortium representing the best option for pursuing this technology. The Rolls-Royce led consortium believes this new technology could create 40,000 jobs at its peak and each power station could produce enough clean energy to power 750,000 homes.

This money is alongside up to £45 million to be invested in the second phase of the Advanced Modular Reactor programme, with project bids currently under consideration.

The Office for Nuclear Regulation and the Environment Agency plan shortly to publish their modernised guidance for developers of SMRs on their Generic Design Assessment, the process through which reactor designs are scrutinised by the regulators prior to further necessary regulatory steps, including site specific assessment and issuing of site licence and environmental permits, to enable subsequent deployment.

Debates

Commons debate: Government Plan for Net Zero Emissions HC Deb 08 October 2019 | Volume 664 c463WH-

<https://hansard.parliament.uk/Commons/2019-10-08/debates/D0C36E64-FCCA-437B-A591-1787251778C6/GovernmentPlanForNetZeroEmissions>

Commons debate: Future of the Oil and Gas Industry

HC Deb 14 March 2019 | Vol 656 c201WH-

<https://hansard.parliament.uk/Commons/2019-03-14/debates/93DC33E0-677F-4B6E-B93C-E5A810263EE4/FutureOfTheOilAndGasIndustry>

PQs

[Developing Countries: Fossil Fuels](#)

Asked by: Hayes, Helen

To ask the Secretary of State for International Development, pursuant to the Answer of 3 February 2020 to Question 9092 on Developing Countries: Climate Change, what assessment his Department has made of the effect of UK Export Finance's funding for international (a) oil and (b) gas projects on developing country dependency on fossil fuels.

Answering member: Dr Andrew Murrison | Department: Department for International Development

The UN's Sustainable Development Goals recognise the importance of affordable clean energy access in order to create economic growth and sustainable development.

All governments that are signatories to the Paris Agreement make their own decisions as to how they will reduce their greenhouse gas emissions to meet their Nationally Determined Contributions. DFID provides technical assistance for developing countries to think about their energy choices and achieve a more sustainable, diversified energy mix. UK ODA increasingly supports renewable energy sources – between 2011-12 and 2018-19 UK aid has provided 26 million people with improved access to clean energy and avoided 16 million tonnes of greenhouse gas emissions. UK Export Finance is not classed as Official Development Assistance.

We are continuing to work closely with departments and agencies across Government, to implement the Prime Minister's announcement on aligning future UK ODA spending with the Paris Agreement.

HC Deb 10 February 2020 | PQ 12394

[Oil: Exports](#)

Asked by: Lake, Ben

To ask the Chancellor of the Exchequer, how much revenue accrued to the public purse from the export of crude and refined oil in 2018.

Answering member: Mr Simon Clarke | Department: Treasury

The UK's oil and gas tax regime applies to the production of oil and gas in the UK and on the United Kingdom Continental Shelf. It comprises three elements, all of which are calculated on the basis of profits, similar to Corporation Tax.

Since the final consumption point of the product is not relevant for the tax calculation, HM Revenue and Customs (HMRC) does not collect this information from oil and gas producers. Therefore HMRC does not hold information on the revenue accrued from the exported oil and/or gas.

Statistics of Government revenues from UK Oil and Gas production are published annually on gov.uk website – a link to the most recent publication (July 2019) is provided below.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/818296/Statistics_of_government_revenues_from_UK_oil_and_gas_production_July_2019.pdf

HC Deb 10 February 2020 | PQ 12387

[Fossil Fuels: Export Credit Guarantees](#)

Asked by: Hayes, Helen

To ask the Secretary of State for International Trade, what estimate her Department has made of the amount of Government investment provided to (a) oil and (b) gas projects through UK Export Finance in each year since 2015.

Answering member: Conor Burns | Department: Department for International Trade

UK Export Finance (UKEF) provides support through loans, guarantees and insurance.

UKEF has provided the following amount of support for oil and gas projects since 2015.

	2015/16	2016/17	2017/18	2018/19
Oil	£556m	£355m	£17m	£1.36bn
Gas	£25m	£375m	£277m	£635m
Oil & Gas*	£16m	£287m	£0.7m	0

*This category represents projects which comprise a combination of oil and gas and the figures are in addition to the separate oil and gas numbers.

The main reason for the increase in figures for 2018/19 is due to support for Petrobras' oil exploration and the construction of two power stations in Iraq.

HC Deb 03 February 2020 | PQ 9090

[Offshore Industry](#)

Asked by: Bowie, Andrew

To ask the Secretary of State for Business, Energy and Industrial Strategy, what progress has been made on the oil and gas sector deal.

Answering member: Kwasi Kwarteng | Department: Department for Business, Energy and Industrial Strategy

The UK's offshore oil and gas industry supports almost 300,000 jobs, of which four in ten are in Scotland. We believe that the North Sea oil and gas industry has a key role to play as we move to a Net Zero economy.

We will support this transition with a transformational oil and gas Sector Deal. BEIS officials have already held preliminary discussions with industry to discuss how such a Sector Deal could enable the sector to play a leading role in the energy transition. Discussions will develop further over the next few months, as the process develops.

HC Deb 28 January 2020 | PQ 6177

[Carbon Capture and Storage: North Sea](#)

Asked by: Davis, Mr David

To ask the Secretary of State for Business, Energy and Industrial Strategy, what steps she is taking to encourage the use of sites under the North Sea for carbon sequestration.

Answering member: Kwasi Kwarteng | Department: Department for Business, Energy and Industrial Strategy

Carbon capture, usage and storage (CCUS) will play a vital role in meeting our net zero greenhouse gas emissions target by 2050, supporting both our Industrial Strategy and the revitalisation of the economies of the UK's industrial areas. The Government is committed to deploying CCUS in the 2020s.

The Oil and Gas Authority issued its first CO₂ storage licence to Pale Blue Dot Energy (Acorn) Ltd (PBD) for the Acorn Carbon Capture and Storage (CCS) Project in 2018.

In order to support the development of potential CO₂ storage sites, the Government invested £2.5 million in the Energy Technologies Institute's (ETI) CO₂ Storage Appraisal Project which looked in detail at eight potential CO₂ storage sites[1]. The UK also has the world-leading CO₂-stored database[2] which is hosted and developed by the British Geological Survey and provides the data for over 500 potential offshore CO₂ storage sites around the UK.

We are working closely with North Sea countries through the North Sea Basin Taskforce to share best practice and cooperate on North Sea CO₂ storage. In October 2019, we cooperated with Norway and the Netherlands to achieve a provisional amendment to the London Protocol, allowing for the cross-border transport of CO₂ for permanent storage, such as in the North Sea – a key breakthrough for UK projects and facilitating international CCUS deployment

[1] Energy Technologies Institute LLP, Strategic UK CCS Storage Appraisal, 2016

[2] CO₂ Stored Database available at:
<http://www.co2stored.co.uk/home/index>

HC Deb 28 January 2020 | PQ 6014

[Carbon Emissions](#)

Asked by: Helen Hayes

The UK Government currently offer more financial support than any other European state for fossil fuel industries. The oil giant Shell paid no corporate income tax last year due to tax rebates, despite making a £557 million profit in the UK. This situation is unsustainable and unacceptable in the context of a climate emergency. Can the Minister explain how a Government who continue to subsidise fossil fuel extraction to such a degree can ever be trusted to deliver net zero?

Answering member: Mr Clarke | Department: Treasury

The most important thing to recognise is that last year was the first year on record in which renewable energy constituted more of our energy mix than fossil fuels. We also need to recognise that oil and gas support many thousands of jobs in the United Kingdom, and we must be careful not to jeopardise economic growth during the transition.

HC Deb 07 January 2020 | Vol 669 c237

[Offshore Industry: Safety](#)

Asked by: Cunningham, Alex

To ask the Secretary of State for Work and Pensions, when she last discussed the safety of workers in the offshore oil and gas industry with representatives of (a) trades unions and (b) the oil and gas industry.

Answering member: Mims Davies | Department: Department for Work and Pensions

The Health and Safety Executive (HSE) and trade unions are members of Step Change in Safety (SCiS) which meets regularly to discuss the safety of the workforce in the offshore sector. In September 2019, an event was organised by SCiS to recognise the influence of the elected safety representatives on offshore safety in the 30 years since legislation was enacted mandating their appointment at all installations in the UKCS. HSE provided speakers and logistical support for this event. The event was attended by over 300 people. It was also live broadcasted worldwide, enabling workers on offshore installations and regulators from other countries to participate.

HSE officials engage with industry leaders through its membership of Oil and Gas UK (OGUK). At OGUK's annual safety conference in November 2019, industry leaders will be making a formal commitment to improve their Process Safety Leadership. HSE's Chair will be speaking at that conference, setting out his expectations for industry leaders, including the need to improve their Process Safety Leadership for the management of major hazard risks.

HC Deb 04 November 2019 | PQ 6374

[Offshore Industry: Scotland](#)**Asked by: Bowie, Andrew**

To ask the Secretary of State for Business, Energy and Industrial Strategy, whether his Department has met with (a) the Scottish Government and (b) representatives of the oil and gas industry in Scotland to discuss (i) domestic skills, (ii) training and (iii) recruitment in that industry in Scotland.

Answering member: Kwasi Kwarteng | Department: Department for Business, Energy and Industrial Strategy

Both Ministers and officials in this department regularly meet with counterparts from the Scottish Government to discuss a wide range of issues impacting the oil and gas sector in Scotland. However, given that skills and related issues in Scotland are devolved these issues are a matter for the Devolved Administration.

BEIS Ministers and officials meet regularly with the oil and gas industry. For example, I met a range of oil and gas industry representatives and a member of the Scottish Government during a visit to Aberdeen on 2 September 2019. The visit included attendance at the Maximising Economic Recovery UK (MER UK) Forum, where a range of industry issues were discussed. On 20 August 2019 the Secretary of State for Business, Energy and Industrial Strategy visited Aberdeen where she met representatives from the energy industry.

HC Deb 09 September 2019 | PQ 281792

[Offshore Industry: Investment](#)**Asked by: Bowie, Andrew**

To ask the Secretary of State for International Trade, what steps she is taking to encourage investment in the oil and gas industry in the (a) UK and (b) north east of Scotland.

Answering member: Graham Stuart | Department: Department for International Trade

The Government is committed to encouraging investment in the oil and gas industry across the whole of the UK, building on previous incentives such as tax reduction and funding support.

It awarded the Oil & Gas Authority a £5 million fund for 2018/19 to survey under-explored areas of the UK Continental Shelf to find potential new deposits. The successful award of licences for the UK's Frontier 31st Offshore Licensing Round announced in June was supported by data from the Government-Funded Seismic Programme.

The Oil & Gas Technology Centre, backed by both the UK and Scottish governments, today has more than £100 million co-invested with industry to develop and deploy technology, helping anchor the industry's expert engineering supply chain in the North East. In May, the government backed industry plans for a Global Underwater Engineering Hub in Aberdeen to reinforce the UK's status as a global leader in the

field and build on expertise in subsea robotics, remotely-operated underwater vehicles and maritime support vessels. This will strengthen Aberdeen's place as an energy hub for offshore and renewables, boosting prospects for new skilled jobs and further investment in the region.

HC Deb 03 September 2019 | PQ 281794

[Offshore Industry](#)

Asked by: Malhotra, Seema

To ask the Secretary of State for Business, Energy and Industrial Strategy, what estimate he has made of the financial contribution of the oil and gas sector to the economy of (a) each region of the UK and (b) the UK; and how many jobs the oil and gas sector supports in each region of UK.

Answering member: Chris Skidmore | Department: Department for Business, Energy and Industrial Strategy

The Department estimates that the oil and gas sector, defined as the combination of Standard Industrial Classification (SIC) codes 6 and 19, made a financial contribution of £23.9bn of Gross Value Added (GVA) to the UK economy in 2018[1]. The latest release of the UK Business Register and Employment Survey indicates that there were 20,700 direct jobs in the sector, with a further 124,100 roles supported in the immediate supply chain.[2] While it is not possible to estimate the economic contribution of the oil and gas sector to each region of the UK with sufficient granularity, the latest Oil and Gas UK Workforce Report estimates that Scotland, Greater London and the South East of England account for three-fifths of total employment supported by the offshore oil and gas industry.[3]

[1] 'Extraction of crude petroleum and natural gas' and 'Manufacture of coke and refined petroleum products' respectively. Note that as SIC code 19 includes coke oven products, this measure may lead to a slight overestimate. For context, the balance of GVA generated is £20.5bn and £3.4bn for SIC codes 6 and 19 respectively: [GDP output approach – low-level aggregates, ONS - June 2019](#)

[2] [Industry \(2, 3 and 5 - digit SIC\) - Business Register and Employment Survey \(BRES\), ONS - September 2018](#)

[3] [Workforce Report, Oil & Gas UK - 2018](#)

HC Deb 17 July 2019 | PQ 275756

[Topical Questions](#)

Asked by: Kirstene Hair

The oil and gas industry has a vital role to play in achieving net zero carbon emissions by 2050. One way of doing so is by providing a commercial incentive for carbon capture and storage. Will the Minister

outline what steps the Department is taking to see whether that could become commercially viable?

Answered by: Chris Skidmore | Department: Business, Energy and Industrial Strategy

We recently announced £26 million for, I think, 11 carbon capture, utilisation and storage projects across the UK, including Project Acorn in Scotland. I visited Tata Chemicals in Cheshire, which is the largest project in the UK; it is 100 times larger than other projects. The Committee on Climate Change report is absolutely clear that 50% of our carbon emission reductions will come from CCUS. We must continue to invest in that more and then take those innovations across the globe.

HC Deb 16 July 2019 | Vol 663 c702

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