National Audit Office

Report
by the Comptroller
and Auditor General

Department for Business, Energy & Industrial Strategy, HM Revenue & Customs, HM Treasury

Oil and gas in the UK – offshore decommissioning

HC 1870 SESSION 2017–2019 25 JANUARY 2019

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Oil and gas in the UK – offshore decommissioning

Report by the Comptroller and Auditor General

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Sir Amyas Morse KCB
Comptroller and Auditor General
National Audit Office

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This report sets out the landscape of oil and gas decommissioning to enable Parliament to consider whether the various government departments involved are protecting taxpayers' interests effectively.

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Contents

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Key facts

£45bn–£77bn

the Oil & Gas Authority's estimate of future decommissioning costs to operators

£24bn

HM Revenue & Custom's estimate of the total cost to government of decommissioning due to tax reliefs

35%

target the Oil & Gas Authority has set for operators by which to reduce their decommissioning costs by 2022

£334 billion	net tax revenues for the government from the oil and gas sector since 1970-71
£290 million	total net repayment from government to oil and gas operators in 2016-17 because tax repayments were greater than tax and licence revenues
£1.2 billion	total net payment from oil and gas operators to government in 2017-18 as tax revenues recovered along with the oil price
10 billion – 20 billion	number of barrels of oil and gas that the Oil & Gas Authority thinks operators can still recover
9	number of operators the Department for Business, Energy & Industrial Strategy has required to set money aside to ensure they have sufficient funds available to cover the costs of decommissioning
£844 million	total amount the Department for Business, Energy & Industrial Strategy has required operators to set aside to ensure they have sufficient funds available to cover the costs of decommissioning
86	number of decommissioning relief deeds HM Treasury had agreed with operators by March 2018. These deeds guarantee that operators will receive tax relief at least in line with that available under 2013 rules

Summary

1 There are currently around 320 fixed installations, such as oil platforms, in production in the UK, primarily in the North Sea. To date, oil and gas assets have enabled operators to recover more than 44 billion barrels of oil and gas. But reserves are running out, with the remaining oil and gas becoming harder to find and extract. The government has an objective to maximise the potential economic value of the UK's remaining oil and gas reserves.

2 Oil and gas operators in the UK are increasingly decommissioning their assets as they are reaching the end of their useful economic lives. Operators' expenditure on decommissioning is rising: they have spent more than £1 billion on decommissioning in each year since 2014. Decommissioning affects the government's finances because operators can recover some of their costs through tax reliefs. These enable operators to deduct decommissioning costs from their taxable profits and potentially claim back some taxes that they have previously paid. With decommissioning activity increasing, the government is paying out more in tax reliefs for decommissioning at the same time as tax revenues have fallen due to a combination of lower production rates, a reduction in oil and gas prices and operators incurring high tax-deductible expenditure. In 2016-17, the government paid out more to oil and gas operators in tax reliefs than it received from them in revenues for the first time, although revenues recovered in 2017-18 and were greater than tax relief payments.

3 The Committee of Public Accounts has recently reported on the range of tax reliefs that the government gives to people and businesses. It found that, because of gaps in its understanding of the costs, the government does not know whether a large number of tax reliefs provide value for money. We have previously reported that the government also does not collect data to enable it to assess whether tax reliefs are effective for achieving its objectives. In response to the Committee's and our recommendations, HM Revenue & Customs (HMRC) has worked to improve its understanding of tax reliefs and increased what it publishes annually about the costs of reliefs to government. It plans to set out by April 2019 how it will improve this reporting, including how it will provide information about tax reliefs for which data are not available.

4 Several public bodies are involved in oil and gas decommissioning:

- The Department for Business, Energy & Industrial Strategy (the Department) has overall responsibility for the safe, cost-effective and environmentally sensitive decommissioning of offshore oil and gas infrastructure.
- The Oil & Gas Authority (OGA) was established in 2015 by the Department to regulate the industry, promote the continued extraction of remaining resources and help operators to reduce their decommissioning costs.
- HM Treasury sets the tax rules for operators, both in terms of the tax paid on profits from oil and gas production and the reliefs available on decommissioning costs.
- HMRC administers the tax reliefs that operators receive (**Figure 1** on pages 8 and 9).

Scope of this report

5 This report sets out the landscape of oil and gas decommissioning to enable Parliament to consider whether the various government departments involved are protecting taxpayers' interests effectively. It covers:

- the role oil and gas has played in the UK economy and the government's current objectives for the sector (Part One);
- the potential costs of decommissioning that operators will pass on to taxpayers (Part Two); and
- how the government is managing the risks to taxpayers (Part Three).

Key findings

Government's objectives for the oil and gas sector

6 **Tax revenues from oil and gas have reduced over the past decade.** The sector has generated £334 billion of net tax revenues for the government since 1970-71. At its peak in 1984-85, tax contributions from the oil and gas sector totalled £30 billion and accounted for 11% of government receipts. But tax revenues have declined from a recent high in 2011-12 due to lower oil and gas prices and operators incurring high levels of expenditure that is tax deductible. In 2016-17, the government paid out more to oil and gas operators in tax reliefs than it received in revenues, resulting in total repayments of £290 million. The Office for Budget Responsibility expects net annual receipts from the oil and gas sector to recover slightly, rising from £1.2 billion in 2017-18 to a projected £2.4 billion in 2022-23 (paragraphs 1.2 to 1.4).

7 **The government wants operators to maximise the potential economic value of remaining oil and gas reserves.** It is primarily a commercial decision for operators as to whether they continue to extract oil and gas using existing assets or invest in constructing new assets to extract new reserves. The government is committed to supporting the industry to maximise extraction due to its role in the economy, supplying energy and providing employment. Since 2013, the government has introduced a series of measures aimed at making it more commercially viable for operators to continue investing in the UK. This includes reducing taxes on oil and gas production, introducing investment allowances to encourage capital investment, providing certainty about tax reliefs for decommissioning, and establishing the OGA to work with the industry to reduce costs and find efficiencies. The OGA has sanction powers (including the ability to revoke licences) if it judges operators not to be fulfilling their obligations for extracting economically viable oil and gas. The OGA estimates that the UK has 10 billion–20 billion barrels of recoverable oil and gas reserves (paragraphs 1.6 to 1.13).

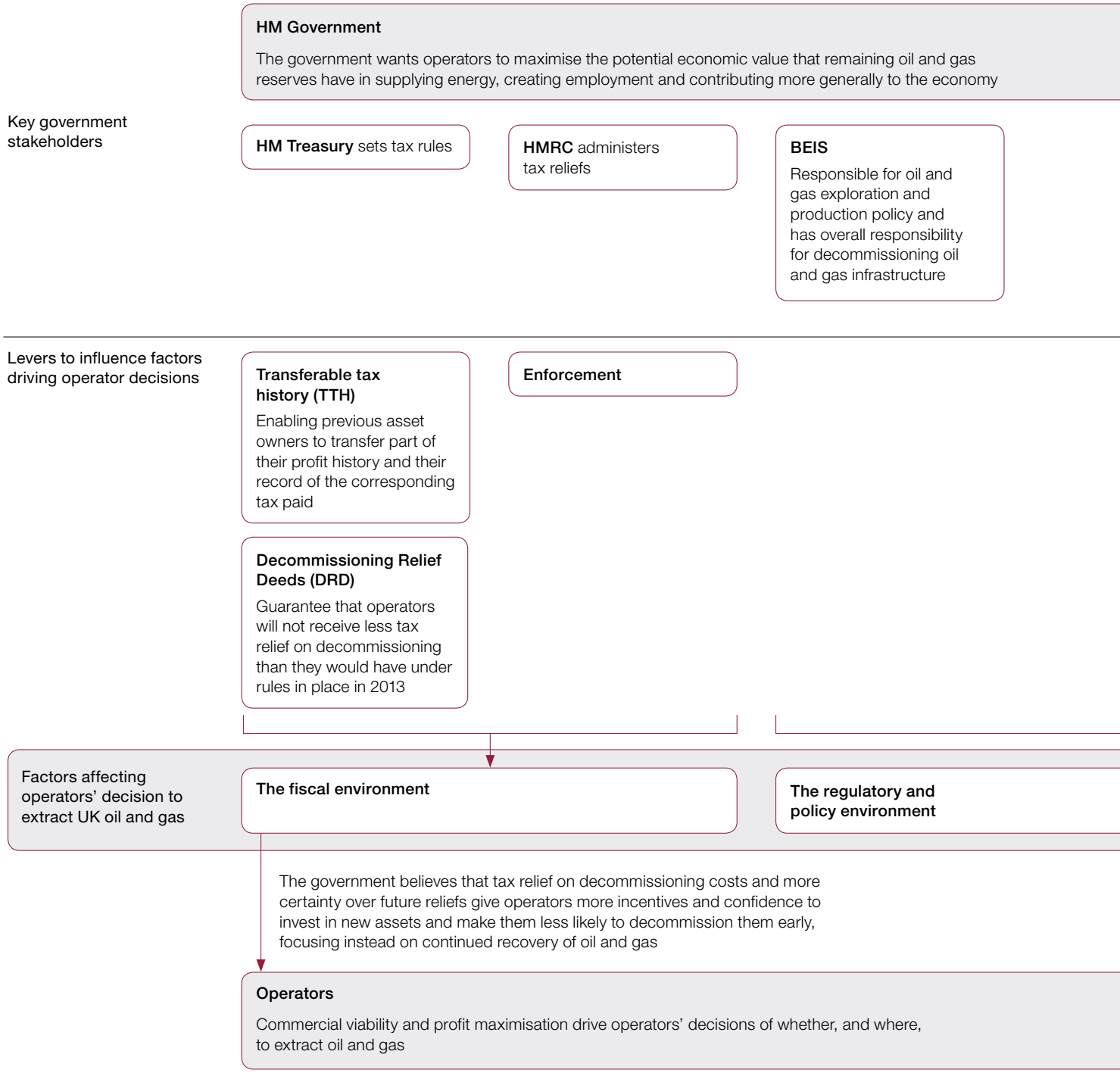
8 **The government projects that oil and gas will play a smaller role in meeting the demand for energy over time.** UK oil and gas will contribute less to meeting energy demand as domestic reserves and production decline, and as the government supports cleaner forms of energy to meet its objectives to reduce carbon dioxide emissions by 80% in 2050 compared with 1990 levels. The Department projects that electricity generation from natural gas will fall by 63% between 2017 and 2035, although there is uncertainty around this as it will depend on the availability of alternative generating sources such as renewables and nuclear power. Oil and gas will remain key fuel sources in certain areas, notably transport and heating, until they can transition to electricity or alternative energy sources. The government has stated that its support for operators to maximise the economic potential of oil and gas reserves is compatible with the UK meeting its climate change objectives (paragraph 1.14).

Decommissioning costs and tax relief

9 **The OGA estimates that decommissioning the UK's oil and gas assets will cost operators between £45 billion and £77 billion.** The OGA requires operators to submit estimates of the costs of decommissioning their assets, which it uses to produce a yearly estimate of the total cost. The OGA expects operators to incur almost all decommissioning costs in the next 20 years, but with some expenditure into the 2060s. It considers decommissioning cost estimates to be highly uncertain, with 49% of estimates expected to be accurate to within -20% to +100% and an additional 40% of estimates only expected to be accurate to within -15% to +50%. The OGA expects its estimates to become more certain in future as operators learn from experience about how much decommissioning will cost (paragraphs 2.6 to 2.8).

Figure 1
Roles and responsibilities for oil and gas

Departments and public bodies use a range of levers to incentivise operators to continue extraction of oil and gas in the UK



Notes

1 HMRC: HM Revenue & Customs. BEIS: The Department for Business, Energy & Industrial Strategy. OPRED: Offshore Petroleum Regulator for Environment and Decommissioning; OPRED operates from within BEIS. OGA: Oil & Gas Authority.

2 The Department oversees the work of the Oil & Gas Authority.

Source: National Audit Office analysis

OPRED

Responsible for ensuring that decommissioning is delivered in a safe, efficient and cost-effective way while minimising the risk to the environment. It does this through approving and monitoring operators' decommissioning plans

OGA

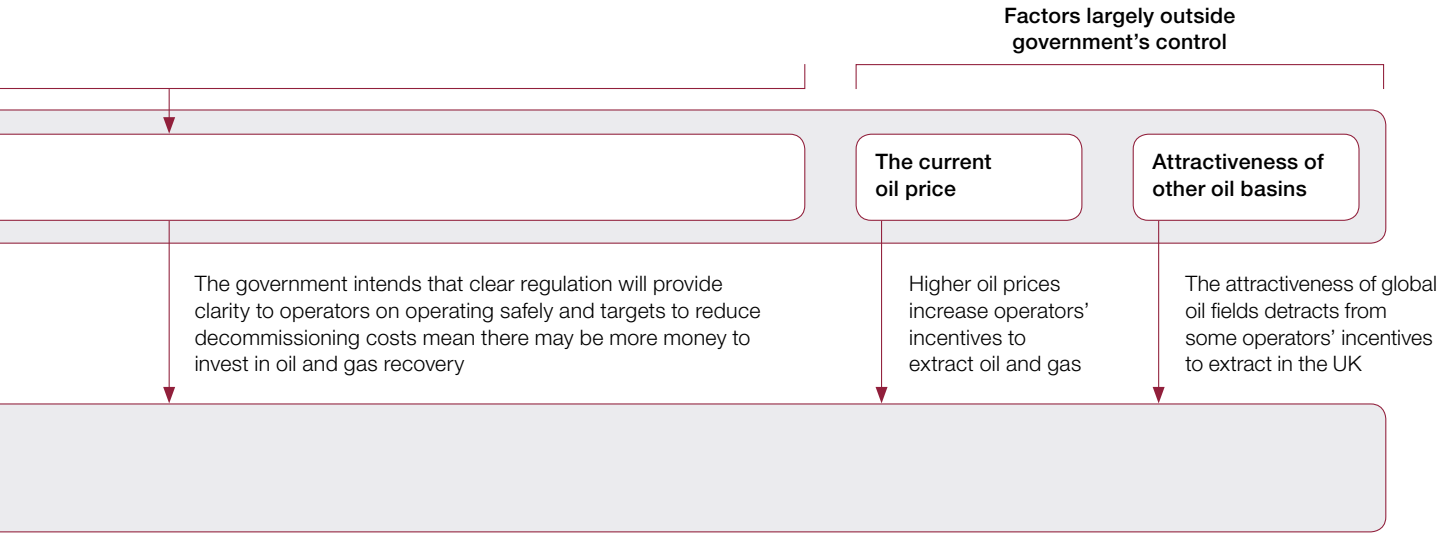
Regulates the industry, promotes extraction and helps operators to reduce decommissioning costs

Security agreements

OPRED can require operators to set aside cash if it believes they may not afford the future costs of decommissioning. To date, OPRED has agreed nine security agreements with operators (£844 million)

Setting a target for cost reduction

Operators must reduce decommissioning costs by 35% between 2017 and 2022



10 To increase incentives to produce oil and gas the government has given operators greater certainty about its support for decommissioning and plans to enable operators to transfer tax histories. Operators can use decommissioning costs to offset corporation tax they have paid since 2002 and petroleum revenue tax, which is a tax on profits made on oil fields commissioned before 1993.

- HM Treasury passed legislation in 2013 that enables it to agree decommissioning relief deeds with operators. These deeds guarantee that operators will receive at least as much tax relief as was available under the 2013 tax rules. The deeds also guarantee an operator tax relief if a partner operator cannot undertake its share of decommissioning. HM Treasury introduced the deeds because it was concerned that a lack of certainty about decommissioning tax reliefs was preventing assets from being traded. It also wanted to avoid operators setting aside money to cover the risk that reliefs for decommissioning would reduce, meaning the operators would be less able to invest in continued extraction of oil and gas. By March 2018, HM Treasury had entered into 86 decommissioning relief deeds and had made payments to one operator because it was meeting a partner operator's share of decommissioning costs. HM Treasury paid this operator £45 million during 2017-18 and expects to pay it a further £299 million in future years.
- In November 2017, HM Treasury announced plans to change the tax rules so that companies buying assets could offset decommissioning costs against taxes paid in the past by the operator selling the assets. HM Treasury intends for these changes to make buying and selling assets more viable for operators, mitigating the risk that assets will be closed early, and expects them to result in a positive net impact on tax revenues (paragraphs 2.9 to 2.16).

11 HMRC estimates that tax repayments and forgone taxes associated with decommissioning will cost the government £24 billion, but this is subject to significant uncertainty. HMRC estimates that it will repay around £12.9 billion to operators in taxes previously collected due to decommissioning tax reliefs, which it discloses a provision for in its financial statements. HMRC estimates that the government will forgo a further £11.1 billion of tax income because of decommissioning expenditure reducing taxable profits. HMRC makes these estimates using the central estimate from the OGA's range of forecast costs to operators, which in 2018 was £58.3 billion. The actual cost to government of decommissioning is highly uncertain as it will depend on how much decommissioning ultimately costs operators as well as future economic conditions, such as oil prices and exchange rates, which determine profits (paragraphs 2.17 and 2.18).

12 Taxpayers are ultimately liable for the total cost of decommissioning assets that operators cannot decommission. Should an operator become insolvent or lack the financial resources to carry out decommissioning, the liability reverts to any joint or previous owners of the asset. If none exist, or there are no such operators with the ability to meet the cost of decommissioning, then the liability falls to the government. The Department discloses the risk that it is required to meet the cost of decommissioning in its financial statements as an unquantifiable remote contingent liability. The Department considers the risk of unfunded decommissioning liabilities to be low because 80% of assets are currently, or have previously been, owned by large oil and gas operators (paragraphs 2.19 and 2.20).

Management of taxpayer risks

13 The OGA has set operators a target to reduce their decommissioning costs by 35% from its 2017 estimate of £59.7 billion by 2022. The OGA is working with the industry to reduce decommissioning costs as part of its wider strategy to maximise the extraction of oil and gas. It has identified key priorities for reducing costs, including: establishing greater certainty about costs; developing capability in the supply chain; and clarifying the requirements of decommissioning regulations. The OGA also wants the UK supply chain to develop in a way that enables it to export skills and resources to other countries that are due to decommission assets later than the UK (paragraphs 3.5 to 3.11).

14 The Department monitors the financial health of operators and can act to mitigate the risk that they will not be able to pay for decommissioning. The Department tracks the financial position of operators compared with its own forecasts of the costs of decommissioning their assets. The Department can require operators to take mitigating actions, such as setting money aside to cover decommissioning liabilities, if it deems there to be a significant risk of unfunded liabilities. To date, the Department has required nine operators to set aside a total of £844 million to pay for decommissioning (paragraphs 3.12 and 3.13).

Measuring government's impact

15 There is evidence of progress against the government's objectives although it is difficult to attribute this to its activities. The OGA told us that, since its creation, 3.7 billion barrels have been added to its central production forecast, and that operators have improved their operating performance. Additionally, the OGA states there has been a 7% reduction in future costs to decommission assets that were included in both its 2017 and 2018 annual estimates. But it is difficult to isolate the impact of the OGA's interventions from wider influences on operators, such as economic conditions, particularly as it encourages certain behaviours by operators rather than mandating them (paragraph 3.14 to 3.18).

16 There are gaps in the government's understanding of the costs and benefits of changes to the tax regime. HMRC plans to publish for the first time in January 2019 the cost of decommissioning tax reliefs given since 2014-15. HM Treasury and HMRC told us they draw on a range of information, including the OGA's data, to assess whether changes to tax rules are achieving the objective to maximise the oil and gas that operators extract. This includes the number of new projects and operators' capital expenditure. HM Treasury prepares five-year revenue forecasts for all tax changes but told us it has not been able to separate out the impact of individual tax changes given the wide range of factors that influence oil and gas production. For one change – the introduction of decommissioning relief deeds – HM Treasury has reported to Parliament that these have enabled operators to invest £5.7 billion elsewhere. HM Treasury does not know whether this money has been reinvested in the UK (paragraphs 3.19 and 3.20).

Part One

The government's objectives for oil and gas

1.1 This part of the report sets out the history of oil and gas production in the UK, its role in supplying energy and the government's objective to maximise the economic potential of the remaining resources.

Oil and gas in the UK economy

History of production

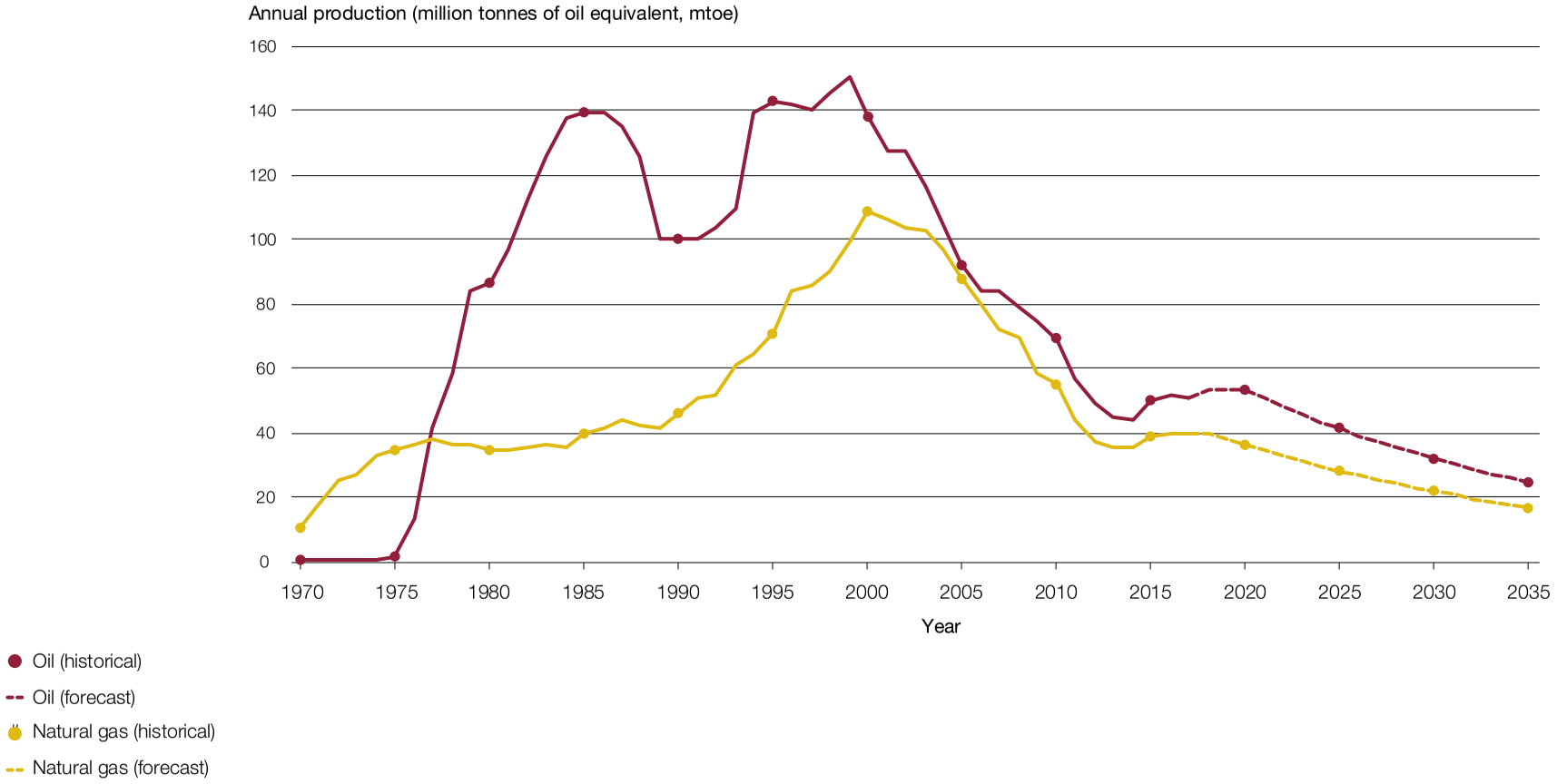
1.2 The UK has exploited its oil and gas reserves, primarily in the North Sea, since the 1960s. Production peaked in the mid-1980s and again in the late 1990s, and has declined steadily since then (**Figure 2**). UK oil production in 2017 was 66% lower than the 1999 peak, while gas production was 63% lower than the peak in 2000.

1.3 At present, around 60 licenced private sector oil and gas operators own and operate around 320 fixed installations in the UK.[1] According to Oil & Gas UK, an industry trade body, the industry supports around 300,000 jobs in the UK, down from a peak of more than 460,000 in 2014. Some 39% of these jobs are based in Scotland.

1 We use the term 'operator' in this report to denote any company with an interest in exploration and production of UK oil and gas. This includes companies that have a financial interest but are not responsible for the day-to-day operations of fields.

Figure 2
UK oil and gas production since 1970

UK oil and gas production peaked in the mid-1980s and in the late-1990s, and has declined steadily since



Note

1 A tonne of oil equivalent (toe) is a unit of energy equivalent to 10,000 megacalories, the theoretical energy content of 1 tonne (1,000 kg) of oil.

Source: National Audit Office analysis of *Digest of UK Energy Statistics* (2018) and Oil and Gas Authority data (2018)

Tax revenues

1.4 The oil and gas sector has generated £334 billion of net tax revenues for the government since 1970-71, in addition to over £4 billion in licence fees.[2] At its peak in 1984-85, tax contributions from oil and gas totalled £30 billion and accounted for 11% of total government tax receipts. But government revenues from oil and gas have declined in recent years, and in 2016-17 the government paid out more to oil and gas operators than it received in tax revenues and licence fee income. Some £1.2 billion of tax was repaid in that year, resulting in a net repayment of £290 million (once tax revenues and licence fee income is taken into account). The fall in receipts has been driven by lower oil and gas prices and high tax-deductible expenditure, including for capital investment and decommissioning. Receipts recovered with the oil price in 2017-18, resulting in a net tax contribution from the oil and gas sector of £1.2 billion. The Office for Budget Responsibility (OBR), which forecasts government tax revenues, expects annual net receipts from oil and gas to continue to rise, from £1.5 billion in 2018-19 to £2.4 billion in 2022-23 (**Figure 3**).

Supplying energy

1.5 The UK's oil and gas have contributed to domestic energy supply. Natural gas is important to electricity generation because the amount of power generated from gas can be increased or decreased quickly. This complements nuclear power, which is less flexible, and renewable sources, such as wind and solar, which generate power intermittently. In 2017, gas accounted for 42% of the total electricity generated in the UK (134 out of 323 terawatt hours).[3] Oil and gas also remain the primary source of energy for transport and domestic heating respectively. Domestic oil and gas production was equivalent to 45% of overall energy demand in 2017 but this is forecast to decline to 21% by 2035. At the same time, the government projects that the UK will become more dependent on oil and gas imports (**Figure 4** on page 16).

Maximising extraction of remaining resources

1.6 The government wants operators to maximise the economic potential of the UK's remaining oil and gas reserves. The Petroleum Act 1998, as amended by the Infrastructure Act 2015, places a duty on the Secretary of State to produce one or more strategies to achieve the principal objective of maximising the UK's remaining resources that operators can recover in an economically viable way. The government is committed to supporting oil and gas operators in this way due to the industry's role in the economy, supplying energy and providing employment.

2 Net tax revenues exclude the gas levy. All monetary values in the report are quoted in 2017 prices (for values given in calendar years) or 2017-18 prices (for values given in financial years) except where explicitly stated otherwise. Inflation is adjusted for according to the relevant GDP deflators.

3 Terawatt hours is a measure used to describe how much power is generated. A terawatt hour is the equivalent of 1 terawatt of capacity generating electricity for one hour.

Figure 3
Tax revenues from the oil and gas industry

The oil and gas industry has generated £334 billion of net tax revenues for the government since 1970-71

Notes

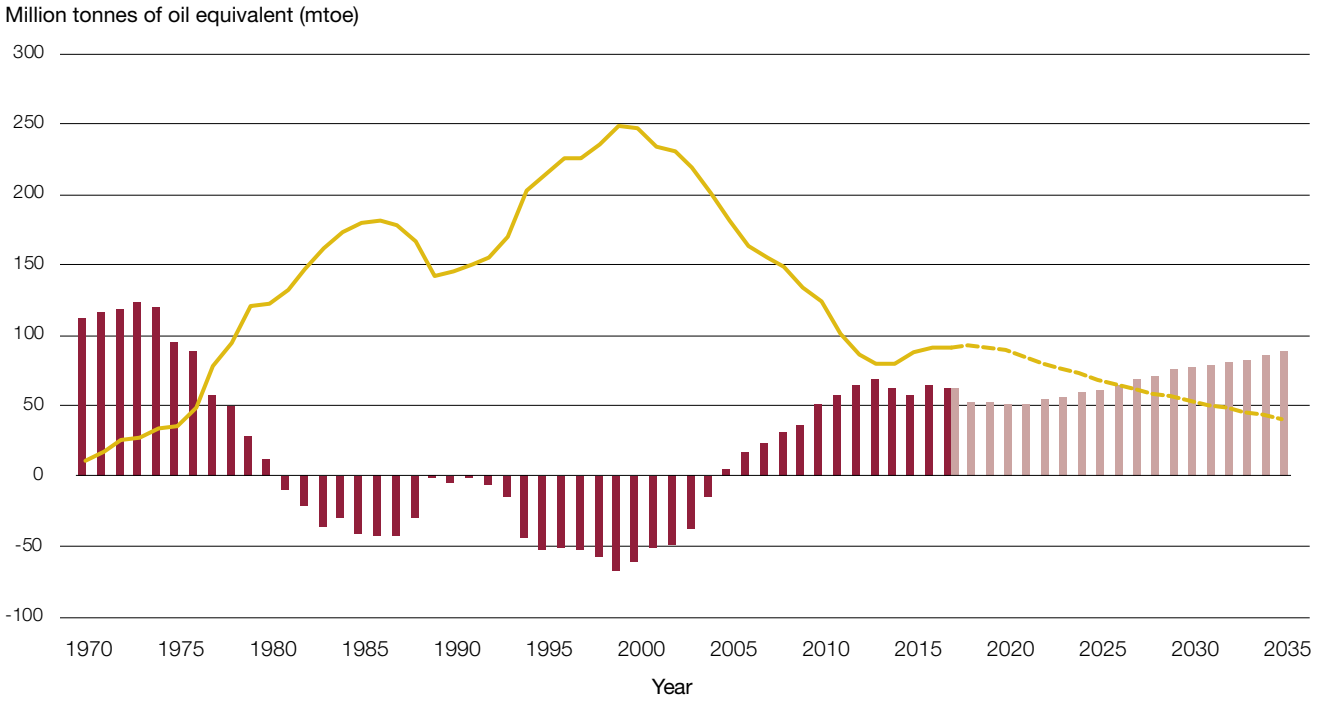
1 Tax revenues are calculated at 2017-18 prices.

2 Licence fee income and the gas levy are not included in these data.

Source: National Audit Office analysis of HM Revenue & Customs (2018) and Office for Budget Responsibility data (2018)

Figure 4
UK dependence on imported oil and gas

Domestic oil and gas production determines whether the UK is a net importer or exporter



Note

1 A negative value for net imports in a given year means there were net exports of oil and gas.

Source: National Audit Office analysis of Oil & Gas Authority (2018) and *Digest of UK Energy Statistics* (2018) data

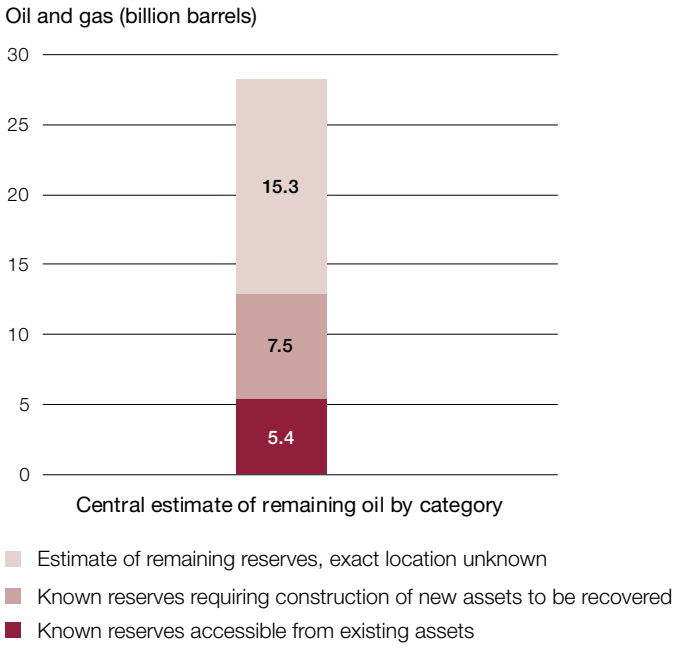
1.7 The Oil and Gas Authority (OGA), which regulates the sector, estimates that 10 billion–20 billion barrels of recoverable oil and gas remain in the UK, in addition to more than 44 billion barrels that operators have already extracted.[4] The overall estimate of oil and gas remaining is made up of the recoverable oil and gas from developed reserves (5.4 billion barrels); discovered but undeveloped resources (7.5 billion barrels); and estimates of the potentially recoverable oil and gas from undiscovered reserves (**Figure 5**). Extracting the remaining recoverable oil and gas will require operators to:

- operate assets efficiently so that they can produce oil and gas for as long as possible, maximising extraction of the remaining resources from known reserves;
- construct new assets in new areas where it is known that unrecovered resources exist; and
- invest in exploration to find previously undiscovered reserves.

Figure 5

The Oil & Gas Authority's estimate of remaining recoverable oil and gas

The Oil & Gas Authority estimates that operators could economically recover between 10 billion and 20 billion barrels of remaining oil and gas



Source: National Audit Office analysis of Oil & Gas Authority data (2018)

4 All references to barrels are to barrels of oil equivalent. This is the energy content of a barrel of oil and allows quantities of natural gas and oil to be combined into a common measure.

1.8 It is primarily a commercial decision for operators as to whether they continue to extract oil and gas using existing assets or invest in constructing new assets to extract undeveloped resources. However, the OGA has sanction powers (including the ability to revoke licences) if it judges operators not to be fulfilling their obligations to extract economically viable oil and gas. Operators' ability to extract remaining resources will be affected by wider economic conditions, such as oil and gas prices. Additionally, many oil and gas assets are interconnected, meaning operators are reliant on other operators keeping assets such as pipelines in use.

1.9 In June 2013, the then Secretary of State commissioned an independent review of oil and gas to look at how to maximise economically viable recovery. The Wood Review was published in February 2014 and recommended the government establish a new arm's-length body to regulate the industry, with powers to implement a strategy for maximising recovery of remaining oil and gas. In response, the Department for Business, Energy & Industrial Strategy (the Department) established the OGA as a new regulator for the industry. HM Treasury also made changes to oil and gas tax rules.

The Oil & Gas Authority

1.10 The OGA's primary objective is to support operators to maximise the extraction of remaining resources. The OGA issues licences for exploration and production and decides with operators when assets can cease production. Alongside its formal regulator role, the OGA aims to influence operators and promote opportunities for investment through a range of activities, such as issuing guidance, facilitating collaboration and releasing data. The OGA had 143 employees as of 31 March 2018 and operating costs of £23.7 million for the year 2017-18. These costs were met by a levy on industry (£19.5 million), fees and charges relating primarily to petroleum licences (£1.7 million) and a £2.5 million grant from the Department.

1.11 The OGA oversees the government's strategy for maximising economic recovery, which came into force in March 2016.[5] This places obligations on licenced operators to take steps to maximise the value of economically recoverable oil and gas. The OGA is responsible for ensuring that operators adhere to the strategy (**Figure 6**).

5 Oil & Gas Authority, *Maximising Economic Recovery UK Strategy*, October 2016, available at: www.ogauthority.co.uk/media/3229/mer-uk-strategy.pdf

Figure 6

The Oil & Gas Authority's (OGA) Maximising Economic Recovery Strategy

The OGA is responsible for ensuring that operators adhere to the strategy and undertakes a range of activities to support and regulate the sector

Central obligation on operators

Relevant persons must, in the exercise of their relevant functions, take the steps necessary to secure that the maximum value of economically recoverable petroleum is recovered from the strata beneath relevant UK waters

How the central obligation can be achieved

Exploration

Should be optimal for maximising economically recoverable petroleum. Licence obligations must be completed and infrastructure should be constructed to maximise economically recoverable petroleum

Asset stewardship

Infrastructure should be maintained and operated to maximise economic recovery

Technology

Technologies deployed to their optimum effect

Decommissioning

All options for continued use explored before decommissioning, which should then be carried out in the most cost-effective way

Required actions and behaviours by operators

Timing

Obligations should be complied with in a timely fashion

Collaboration

Consider whether collaboration with others could reduce costs or increase recovery

Cost reduction

All lifecycle costs (including decommissioning) should be reduced as far as possible

OGA role

Influencing/promoting

Asset Stewardship Strategy

Sets clear expectations for optimising production, using technology and collaboration. OGA meets operators to undertake stewardship reviews

Direct support

Government has funded OGA to undertake £40 million worth of seismic surveys to identify areas where there are unrecovered reserves. OGA has made survey data freely available to potential licensees

Technology

OGA is working with the Oil and Gas Technology Centre, which is jointly funded by the UK and Scottish governments, to set priorities for where new technologies need to be developed and promote innovation

Regulatory

Licensing

Grants licences for exploration and production

Powers to intervene

OGA has a range of powers, including making non-binding recommendations in the case of disputes; accessing operators' information and samples; attending meetings between operators and ultimately imposing sanctions where operators do not comply with their obligations

Source: National Audit Office analysis of Oil & Gas Authority documents

Changes to oil and gas taxation

1.12 In 2013, HM Treasury introduced decommissioning relief deeds to give operators greater certainty about the tax relief they will receive for decommissioning. We explain this in more detail in Part Two.

1.13 In 2014, HM Treasury stated the fiscal regime needed significant change to continue to attract investment in the oil and gas sector.[6] This was because of a trend towards smaller oil and gas fields with higher costs, meaning the UK could struggle to attract investment in a competitive global environment. HM Treasury concluded that the overall tax burden would need to fall and subsequently has reduced tax rates for oil and gas companies and introduced investment allowances to encourage capital investment. (**Figure 7**). HM Treasury intends these changes to make buying and selling assets more viable for operators, mitigating the risk that assets will be closed early.

The declining role of oil and gas in the economy

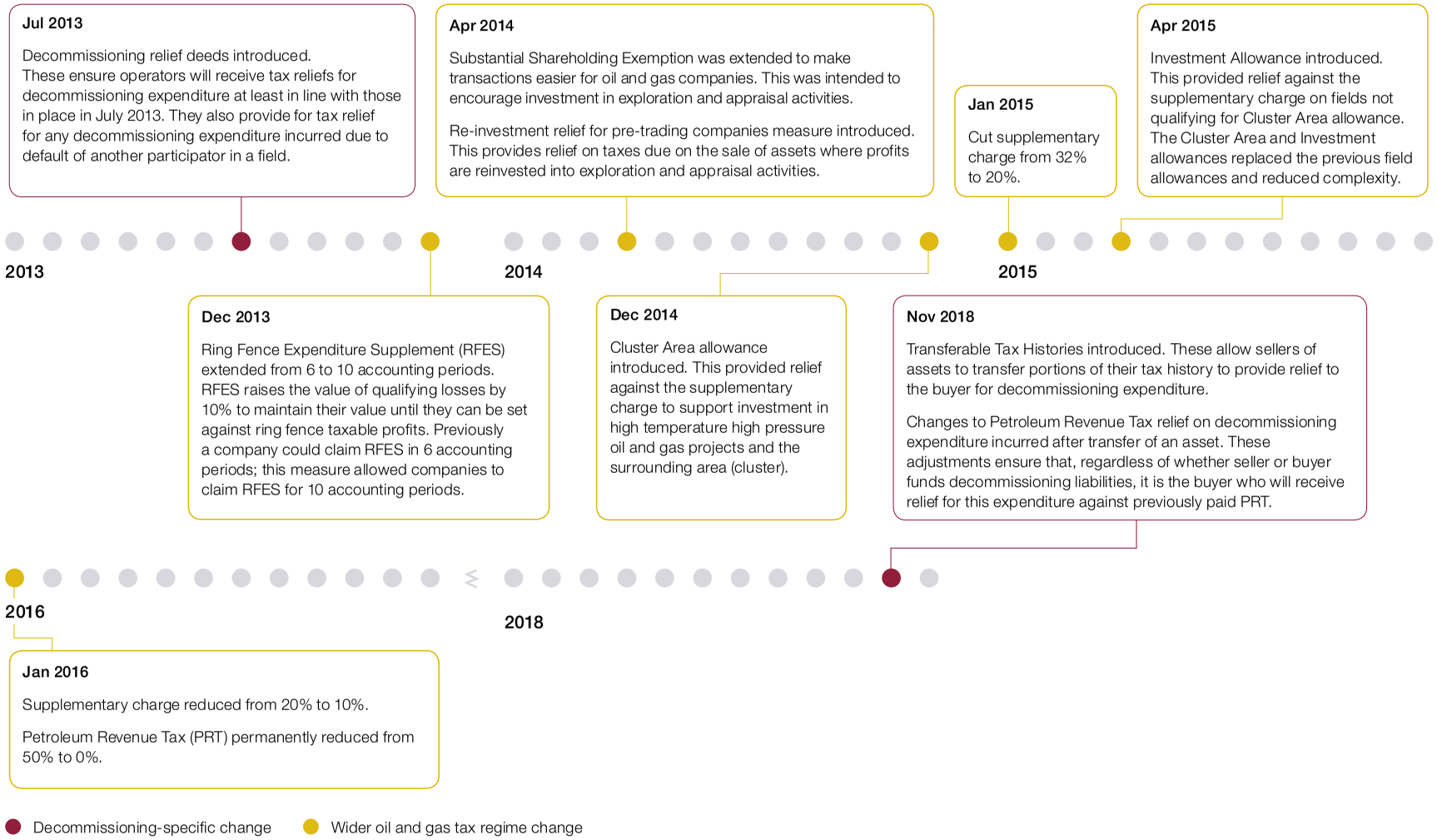
1.14 The government projects that oil and gas will play a smaller role in meeting the demand for energy over time. The Department forecasts that electricity generation from natural gas will fall by 63% between 2017 (134 terawatt hours) and 2035 (49 terawatt hours), though there is uncertainty around this as it will depend on the availability of alternative generating sources such as renewables and nuclear power. The government projects that the use of oil and gas in the economy will decline as part of the UK meeting its objective to reduce carbon dioxide emissions, but that they will continue to play a role, particularly in transport and heating, during the transition to cleaner forms of energy. The 2008 Climate Change Act states that the UK should reduce its carbon dioxide emissions by 80% in 2050 compared with 1990 levels. The government has stated that its support for operators in maximising the economically viable recovery of oil and gas is compatible with the UK meeting its climate change objectives.

6 HM Treasury, *Driving investment: a plan to reform the oil and gas fiscal regime*, December 2014.

Figure 7

HM Treasury's changes to oil and gas taxation since 2013

HM Treasury has reduced tax rates for operators and given greater certainty over tax relief for decommissioning



Note

1 Dates shown are when changes became effective.

Source: National Audit Office analysis of HM Treasury and HM Revenue & Customs data

Part Two

The costs of decommissioning

2.1 This part of the report sets out what operators are required to do when decommissioning their assets, the expected costs of decommissioning and how much of this cost the government estimates will be met by taxpayers.

Decommissioning regulations

2.2 Operators are responsible for decommissioning their oil and gas assets when they reach the end of their economic life. Decommissioning activities include:

- Plugging and abandoning wells under the seabed. This activity is expected to form around half of total future decommissioning costs;
- Removing or burying pipelines;
- Removing infrastructure above and below the seabed, including the visible 'topside'. This can be dismantled into small pieces, modules or lifted in one piece and taken to shore; and
- Other, smaller costs, such as onshore dismantling and recycling, and project management. There may also be long-term costs to monitor assets left in place.

2.3 Operators are bound by regulation underpinned by international obligations such as the OSPAR 98/3 agreement between 15 governments and the EU. This requires operators to remove disused offshore installations from the marine environment, with exceptions in certain circumstances.[7] In the UK, the Petroleum Act 1998 controls the decommissioning of offshore oil and gas assets.

2.4 The Department for Business, Energy & Industrial Strategy (the Department) is responsible for managing the UK's energy legacy safely and responsibly. This means it is accountable for the decommissioning of oil and gas assets. It has stated that it aims to achieve safe, cost-effective and environmentally sensitive decommissioning of offshore oil and gas infrastructure, while ensuring that the UK benefits from the job opportunities this will create.[8]

7 OSPAR is the mechanism by which 15 governments and the EU cooperate to protect the marine environment of the north-east Atlantic. OSPAR is so named because of the original Oslo and Paris Conventions.

8 See the Department's *Single Departmental Plan*, May 2018, paragraph 4.4, available at: www.gov.uk/government/publications/department-for-business-energy-and-industrial-strategy-single-departmental-plan/department-for-business-energy-and-industrial-strategy-single-departmental-plan-may-2018#ensure-the-uk-has-a-reliable-low-cost-and-clean-energy-system

2.5 The Offshore Petroleum Regulator for Environment and Decommissioning (OPRED), which is part of the Department, must approve operators' decommissioning plans by ensuring they comply with the requirements of the Petroleum Act and international obligations. OPRED assesses an operator's decommissioning plan against five criteria: safety; environmental impacts; technological feasibility; societal impacts; and cost. Once it approves a plan, OPRED monitors the operator's progress against an agreed timeline and can require operators to submit a revised plan if it thinks they are falling behind.

Decommissioning costs

2.6 Operators' expenditure on decommissioning has increased significantly over the past decade. In 2004, when decommissioning costs were first reported separately, these amounted to £191 million. Costs have risen to more than £1 billion per year since 2014. Costs to operators of decommissioning as a proportion of operating costs have grown from 5% in 2010 to 15% in 2017.

2.7 The Oil & Gas Authority (OGA) produces an annual estimate of the total future costs to operators of decommissioning. In June 2018, the OGA estimated that the total costs of remaining oil and gas decommissioning would be between £45 billion and £77 billion (10% and 90% percentiles), with a central estimate of £58.3 billion.[9] The OGA expects operators to incur almost all decommissioning costs in the next 20 years, but with some expenditure into the 2060s (**Figure 8** overleaf).

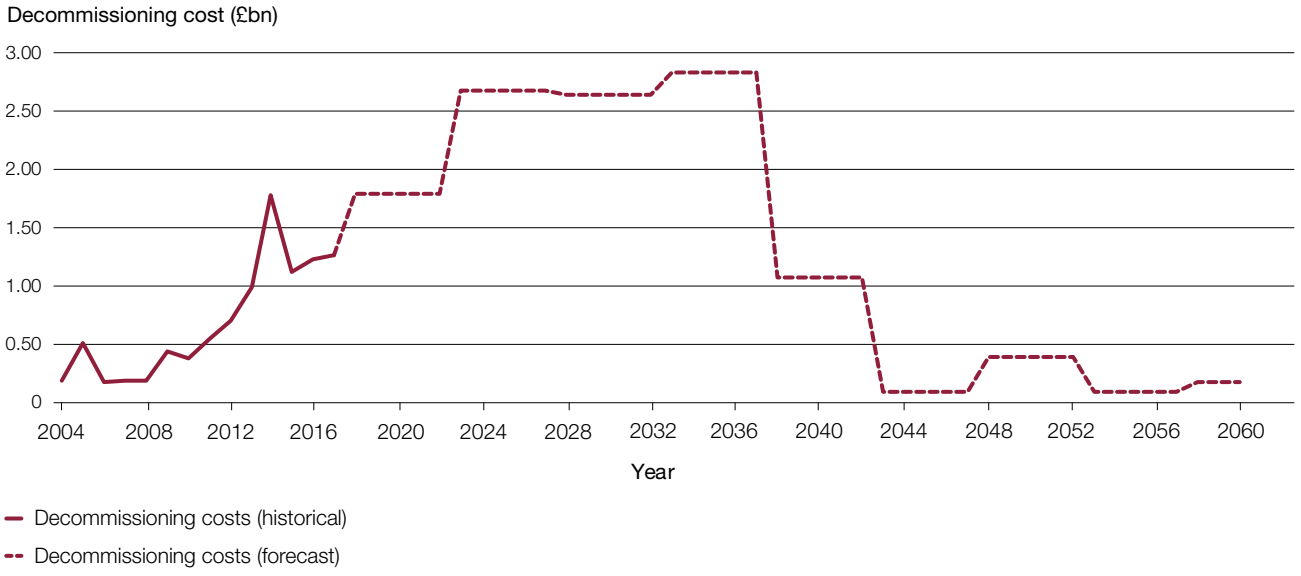
2.8 The future costs of decommissioning oil and gas assets are very uncertain. The OGA expects 49% of operators' estimates to be accurate to within -20% to +100%. It expects an additional 40% of estimates to be accurate to within -15% to +50%. Decommissioning costs are uncertain because operators will not incur much of the costs for many years or decades, by which time decommissioning technology, supply chain prices, and environmental regulations could all have changed significantly. These factors, as well as wider economic conditions, will also have an impact on the timing of decommissioning. Additionally, there is the potential for some oil and gas assets to be reused for carbon capture usage and storage, for example, rather than being decommissioned.

9 The previous 2017 estimate was £59.7 billion (in 2016 prices).

Figure 8

Decommissioning expenditure over time

The Oil & Gas Authority expects operators to incur almost all decommissioning costs in the next 20 years, but with some expenditure into the 2060s



Notes

1 Values quoted in 2017 prices.

2 Costs quoted after 2017 are five-year averages.

Source: National Audit Office analysis of Oil & Gas Authority data (2018)

Decommissioning tax reliefs

2.9 While operators are responsible for decommissioning their assets, the government gives operators tax reliefs against their decommissioning costs. Tax reliefs allow operators to offset their decommissioning costs against their revenue, resulting in less of their profit being subject to tax. This can also result in the government repaying tax previously paid. Decommissioning is one example of capital expenditure incurred during business that companies can deduct from profits for tax purposes. There is a range of such allowances available across different sectors related to investment, such as in infrastructure, plant and machinery, research and development. There is also other deductible expenditure relating to the lifecycle of oil and gas assets, including the costs of exploration, set-up and operation.

2.10 HM Treasury and HM Revenue & Customs (HMRC) expect decommissioning tax reliefs to support the government's objective to maximise the oil and gas that operators extract. They consider that reliefs make it more viable for operators to extend the life of existing assets or free up resources to invest in new exploration and production.

2.11 Operators can receive reliefs for two types of tax:

- **Corporation tax:** Oil and gas operators pay a modified corporation tax consisting of ring-fenced corporation tax at 30% of profits, with a supplementary charge of 10%.[10] Operators can use decommissioning costs to offset corporation tax paid since 2002.
- **Petroleum Revenue Tax (PRT):** PRT is charged on profits that operators make on fields that were commissioned before 1993. In March 2016, the government reduced PRT from 50% to 0% from January that year. Operators can offset allowable expenditure, including decommissioning costs, against profits made from the field being decommissioned chargeable to PRT in any previous year.

Decommissioning relief deeds

2.12 Since 2013, HM Treasury has agreed decommissioning relief deeds with operators. These deeds guarantee that tax relief for decommissioning will not be lower than under 2013 rules (as set out in paragraph 2.11) and provide certainty that operators will receive tax relief should they incur any additional decommissioning costs due to the default of another party. An operator will receive payments from the government that make up the difference if:

- the tax relief rules change; or
- a partner operator on a project cannot afford to contribute to the costs of decommissioning the asset, meaning the operator incurs additional decommissioning costs. It can receive tax relief relating to these additional costs at a fixed rate (for corporation tax) or according to past tax paid by the operator (in the case of PRT).

2.13 The deeds were introduced because HM Treasury was concerned that a lack of certainty about decommissioning tax relief had led operators to set aside money for decommissioning on a pre-tax (rather than post-tax) basis. HM Treasury was concerned that this reduced investment, since more money was tied up in decommissioning security agreements; created barriers to the trading of assets because prospective buyers were required to set aside more money than would ultimately be required for decommissioning; and potentially created incentives to decommission sooner if operators believed reliefs would be reduced in future years.

10 The supplementary charge was introduced in 2002. The government reduced it from 32% to 20% in 2015 and from 20% to 10% in 2016.

2.14 By March 2018, HM Treasury had entered into 86 decommissioning relief deeds. Since the deeds were introduced, one claim has been made because of a company defaulting on its decommissioning obligations. This led to payments of £5.4 million in 2016-17 (in 2016-17 prices) and £45 million in 2017-18 by HM Treasury. HM Treasury included a provision worth £299 million in its 2017-18 financial statements, which reflects the amount it expects to pay out in respect of this claim.

2.15 The oil and gas industry welcomed the introduction of decommissioning relief deeds. When HM Treasury consulted on the introduction of the deeds in 2012, all respondents agreed that the deeds would help to encourage and sustain investment in UK oil and gas. They highlighted that the ability of operators to set aside money for decommissioning on a post-tax basis rather than a pre-tax basis would free up money for re-investment. The deeds support the existing arrangements that many operators had within their joint ventures with other operators to have security over decommissioning costs.

Tax reliefs when assets are bought and sold

2.16 In the 2017 Budget, HM Treasury announced plans to change tax reliefs available to operators buying and selling assets. As of November 2018:

- the purchasers of an oil and gas licence may be able to acquire some of the seller's tax history and set decommissioning losses against profits earned by the seller. This rule will mean the buyer and seller of an asset are able to decide jointly to transfer some or all of the seller's tax history to the buyer for it to claim decommissioning tax relief against in the future. The transferred tax history can only be accessed if the cost of decommissioning is greater than the profits made by the buyer on the asset after purchase; and
- tax relief will be available to buyers in situations where the seller ceases to be a licensee but retains liability for decommissioning, or otherwise pays for decommissioning even where the buyer becomes liable. Previously, rules had prevented either buyer or seller claiming PRT relief in these circumstances.

These changes are aimed at mitigating tax-based barriers to operators transferring ownership of assets, which could lead to earlier closure of the assets with fewer resources having been recovered. HM Treasury expects these changes to have a positive net impact on tax revenues in the next five years.

Future cost of tax reliefs

2.17 HMRC forecasts that the cost of tax relief to the taxpayer because of decommissioning expenditure will be approximately £24 billion from 2018-19 to 2062-63. The total cost to government consists of:

- £12.9 billion of tax that HMRC expects to repay to operators, which it includes a provision for in its financial statements; and
- £11.1 billion of future tax revenue that will be forgone because of operators' profits being reduced by decommissioning expenditure.

The provision in HMRC's accounts increased by £6.5 billion in 2017-18 as this was the first year that it recognised the future costs of tax reliefs for corporation tax in addition to PRT.

2.18 HMRC's estimates are based on the OGA's central estimate of the costs to operators of decommissioning (£58.3 billion).[11] The actual cost taxpayers will incur is highly uncertain. This is in line with the uncertainty of the OGA's estimate of decommissioning costs for operators, as well as other economic factors that feed into HMRC's estimate, such as future oil prices and exchange rates. HMRC's estimate of the potential cost to taxpayers does not reflect this uncertainty as it is a single 'point' estimate (£24 billion).

2.19 Taxpayers will be liable for the full costs of decommissioning assets if operators are unable to pay in certain circumstances. If an operator is unable to meet its decommissioning liabilities, under the Petroleum Act 1998, the liability transfers to any existing partners or any other operator that was previously liable for decommissioning the asset. If there are no previous operators able to fund the decommissioning, the liability ultimately falls to the government. This would mean taxpayers could be liable for the entire cost of decommissioning an asset, rather than the current situation where it only covers a portion through tax reliefs.

2.20 The Department is the part of government that is ultimately responsible for operating and decommissioning oil and gas assets if the current or previous owners cannot do this, for example due to insolvency. The Department discloses the risk that it may be required to meet the cost of decommissioning in its financial statements as an unquantifiable remote contingent liability. It says the potential cost of these liabilities will vary by site and cannot be forecast reliably.

11 HMRC's estimates are expressed in nominal prices with nominal discounting. The total cost of decommissioning estimated by the OGA of £58.3 billion is expressed in 2017-18 prices; the equivalent cost of decommissioning expressed in nominal prices with nominal discounting used in the HMRC analysis is £64 billion.

Part Three

Government's actions to minimise taxpayers' costs

3.1 This part of the report sets out the actions the government is taking to minimise the costs of decommissioning to taxpayers.

Tax compliance

3.2 HM Revenue & Customs (HMRC) aims to ensure tax compliance of oil and gas companies in line with its approach to large businesses more generally. It assigns a customer compliance manager to each of the UK's largest companies. The compliance manager uses their knowledge of each business and the sectors it operates in to ensure that the company pays everything it owes. HMRC also has specialist teams that deal with mid-sized oil and gas companies and a sector lead to ensure consistency across the sector.

3.3 We have previously reported that HMRC's general approach to compliance risk is based on segmenting customers rather than monitoring particular tax reliefs in order to understand the potential scale of non-compliance. Within each segmentation, HMRC prioritises the highest risks, which may include particular tax reliefs. HMRC told us the way it ensures that the tax reliefs it gives to oil and gas companies are accurate is in line with its wider corporation tax self-assessment system and that it has specialist oil and gas teams that review claims. Through this, oil and gas companies self-assess their decommissioning expenditure and include claims for relief in their tax return for each accounting period. These are then reviewed by tax specialists in HMRC, with additional resources assigned to the areas of greatest risk. It can then obtain further information through ongoing engagement with the companies or formal compliance checks.

3.4 HMRC told us that it had around 50% of its largest oil and gas businesses under active investigation in 2017-18, which is in line with its investigation rates for large businesses across all sectors. Where agreement cannot be reached with companies, HMRC can challenge tax relief claims in court. It was recently successful in challenging a claim for decommissioning relief on £158 million of expenditure by an operator, which HMRC calculates resulted in nearly £80 million of tax revenue being protected.

Reducing decommissioning costs

3.5 Decommissioning relief deeds effectively fix the tax reliefs that operators will receive. This means the government can only reduce the cost to taxpayers of decommissioning by supporting operators to reduce their costs.

3.6 In 2016, the Oil & Gas Authority (OGA) published its decommissioning strategy, which stated that it will work with the sector to reduce the overall cost of decommissioning by at least 35% by 2020. Initially, this target was against a 2015 estimate by an independent industry expert that decommissioning would cost £47 billion (in 2016 prices). This would have meant reducing forecast costs to around £31 billion. In 2017, the OGA updated the baseline for its target to £59.7 billion (in 2016 prices), based on its own estimate and stated that it wanted to reduce the midpoint of its forecast cost to below £39 billion (in 2016 prices) by 2020. In January 2019, it revised the timeframe for the target to 2022.

3.7 The OGA has identified three priorities for reducing decommissioning costs:

- **Cost certainty, benchmarking and reduction:** if the expected costs of decommissioning are clearer, the OGA will be able to analyse data and benchmark them, both across the oil and gas sector and with other decommissioning sectors and complementary industries, such as salvage. The OGA hopes this will enable it to share best practice with industry stakeholders.
- **Decommissioning delivery capability:** using cost estimates to forecast demand for decommissioning activities will help to create a predictable and sustainable market that stimulates investment in new business models. For example, some stakeholders have suggested that new specialist decommissioning companies could be established that undertake decommissioning for several operators, rather than operators managing their own decommissioning.
- **Clarity of requirements for decommissioning:** the OGA wants operators to engage early with the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) to ensure that they understand fully what is required in establishing decommissioning plans to remove any unnecessary work.

3.8 The OGA also aims to promote a culture of collaboration between operators so that they share lessons on what has worked well in early decommissioning projects. This extends to encouraging operators to decommission assets jointly, where this can reduce overall costs, as resources can be reused and lessons applied immediately. The OGA's data provide opportunities to identify assets in similar areas that are due to be decommissioned at the same time.

3.9 While the OGA is seeking to reduce decommissioning costs, it has stated that there are risks that decommissioning costs will increase from the current estimate:

- Operators' estimates are based on current prices set by the supply chain. These costs may increase over the time that decommissioning will take place. This could happen if an increase in decommissioning activity puts pressure on supply chain capacity, as could competition for resources from other sectors, such as constructing offshore wind farms.
- Operators may start planning for decommissioning too late and miss out on opportunities to reduce costs that come from early planning. They may also use traditional project and contracting approaches that unnecessarily over-engineer solutions.
- Operators may not invest sufficiently in new technologies or transfer of technologies from other sectors.

3.10 The government has funded the development of new technologies aimed at reducing the costs of decommissioning. The UK and Scottish governments established the Oil and Gas Technology Centre (OGTC) in 2016 with £180 million of funding as part of the Aberdeen City Region Deal. The OGTC co-invests in industry-led projects to develop new technologies that could enable decommissioning to be completed more efficiently. In January 2019, the OGTC, in partnership with the University of Aberdeen, established The National Decommissioning Centre, an industry-led centre of excellence set up to deliver research and training in oil and gas decommissioning.

3.11 As well as reducing costs, there are opportunities to export decommissioning skills and resources. In the 2018 Budget, the government announced it would work with the OGA to call for evidence to identify ways of strengthening the UK's position as a global hub for decommissioning. The UK has some of the most mature assets in the world: of the 2,379 North Sea wells expected to be decommissioned by 2027, 62% are located in the UK's waters, while the UK is projected to spend more than any other country in the world on decommissioning over the same period.[12] The OGA aims to ensure the UK's skills and capacity are exported when other oil and gas producing regions mature: for example, it is estimated that in the next 20 years more than 3,700 structures will require decommissioning in South-East Asia, West Africa, Latin America and the Arabian Gulf.

12 This includes West of Shetland.

Decommissioning security agreements

3.12 OPRED can require operators to take mitigating actions, such as depositing cash into a trust fund, if it believes that there is an unacceptable level of risk of decommissioning costs falling to government. To date, OPRED has agreed nine security agreements with operators, and a total of £844 million has been set aside for decommissioning.

3.13 OPRED monitors the financial health of operators to determine their financial position compared with their anticipated costs to decommission assets. For example, it assesses operators' ratio of assets to liabilities in their accounts and has access to data provided by a consultancy firm on operators' financial health. OPRED prioritises its monitoring on fields it considers to be at highest risk of unfunded liabilities, roughly 20% of the UK's oil and gas assets. These fields tend to be those that have never been owned by a large publicly traded oil and gas operator.

Monitoring and evaluation

3.14 HM Treasury expects all departments to evaluate the impacts and costs of all their interventions, including spending, taxation and regulation. This activity should provide valuable information on the cost-effectiveness of government interventions, for the purposes of accountability and to learn lessons to improve current and future policies. The rest of this part of the report sets out how the government is monitoring and evaluating the changes it has made to the oil and gas regulatory and tax regimes.

Impact of the OGA

3.15 The OGA told us that it draws on a number of indicators to determine whether it is achieving the government's aim to maximise recovery of remaining resources. For example:

- since the OGA's creation, 3.7 billion barrels have been added to the central production forecast to 2050;
- its latest licensing round, in May 2018, saw it offer 123 licences, which open up potentially 320 million barrels in undeveloped discovered resources; and
- it is helping operators to improve their performance. This includes increasing daily production of oil and gas from 1.4 million barrels in 2014 to 1.6 million in 2017, while reducing unit operating costs from £19 per barrel to £12 per barrel in the same period.

3.16 The OGA also monitors progress in reducing the expected costs of decommissioning through its annual survey. The OGA has only conducted its survey twice to date, making it difficult to draw meaningful conclusions about any trends towards reduction. In 2017, the OGA's central estimate was that decommissioning costs from 2017 onwards would be £59.7 billion (in 2016 prices). Its central estimate in 2018 was that decommissioning from 2018 onwards would cost £58.3 billion (in 2017 prices), in addition to the £1.3 billion of decommissioning costs that operators incurred during 2017 (in 2017 prices).

3.17 The projected cost of decommissioning individual projects has fallen between the two surveys. The OGA estimates that the cost to decommission just the assets it had included in its 2017 estimate fell by 7% to £55.7 billion (in 2016 prices) in 2018. But the OGA has added new projects to its estimate, which partly offsets these reductions in its overall calculation.

3.18 It is difficult for the government to attribute progress in maximising recovery and reducing decommissioning costs to the OGA's actions alone. The Department for Business, Energy & Industrial Strategy told us that it is difficult to measure the impact of the OGA's intervention, particularly as the OGA mostly encourages rather than mandates operators to act in particular ways. Additionally, the OGA encourages operators to act in their own interest. Reducing decommissioning costs, for example, will reduce the costs to operators as well as for taxpayers. The OGA told us they have offered operators the ability to benchmark their plans against their peers, and that this has led to more forecasted cost reductions as operators review their work, how they engage with other operators and the supply chain, and identifying cost savings. However, several wider factors that will affect operators' decisions are beyond the government's control, such as oil prices. These factors make it difficult to measure the additional impact of the government's interventions over and above what would have happened without it intervening.

Changes to the fiscal regime

3.19 HM Treasury and HMRC told us that they draw on a range of information, which includes what the OGA collects, to assess whether recent changes to taxation, including tax reliefs, are supporting the government's objective to maximise recovery of remaining oil and gas. This includes operators' capital investment and the number of new fields being approved. HM Treasury prepares five-year revenue forecasts for all tax changes but told us it has not been able to separate out the impact of individual tax changes given the wide range of factors that influence production. It expects the tax regime to have an important influence on operators' investment decisions. HM Treasury has reported to Parliament that introducing decommissioning relief deeds has enabled operators to invest £5.7 billion elsewhere. This is based on Oil & Gas UK's assessment, which we have not audited, that purchasers of assets do not need to set aside contingency for decommissioning costs increasing as a result of tax rule changes. HM Treasury does not monitor how much of this is reinvested in the UK.

3.20 HMRC has not historically calculated the total combined cost of decommissioning reliefs it has already given to operators. It plans to publish this information for the first time in January 2019. The Committee of Public Accounts has recently reported that the government does not know whether a large number of tax reliefs deliver value for money because of gaps in the government's understanding of costs.[13] In response to the Committee's and our recommendations over recent years, HMRC has worked to improve its understanding of tax reliefs and increased what it publishes annually about the costs of reliefs to government.[14] It plans to set out by April 2019 how it will improve this reporting, including how it will provide information about tax reliefs for which data are not available.

13 HC Committee of Public Accounts, *HMRC's performance in 2017-18*, Sixty-sixth Report of Session 2017–2019, HC 1526, November 2018.

14 Comptroller and Auditor General, HM Revenue & Customs, *The effective management of tax reliefs*, Session 2014-15, HC 785, National Audit Office, November 2014; Comptroller and Auditor General, HM Revenue & Customs 2015-16 Accounts, *Report by the Comptroller and Auditor General*, July 2016.

Appendix One

Our evidence base

1 Our findings on oil and gas in the UK were reached following the analysis of evidence collected between June and December 2018. Our main methods are outlined below.

Document review

2 We reviewed key documents including:

- the Oil & Gas Authority's (OGA) estimate of decommissioning costs;
- HM Treasury documents about the changes to tax rules, including decommissioning relief deeds;
- government financial statements; and
- written Ministerial Statements.

Interviews

3 We undertook semi-structured interviews with officials in the Department for Business, Energy & Industrial Strategy, HM Treasury and HM Revenue & Customs (HMRC).

4 We undertook semi-structured interviews with other oil and gas stakeholders including the OGA, Oil & Gas UK and representatives from oil and gas companies and academia.

Quantitative analysis

5 We analysed OGA data on oil and gas production and decommissioning costs. We analysed HMRC data on historical tax revenues and forecast costs of tax reliefs.

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