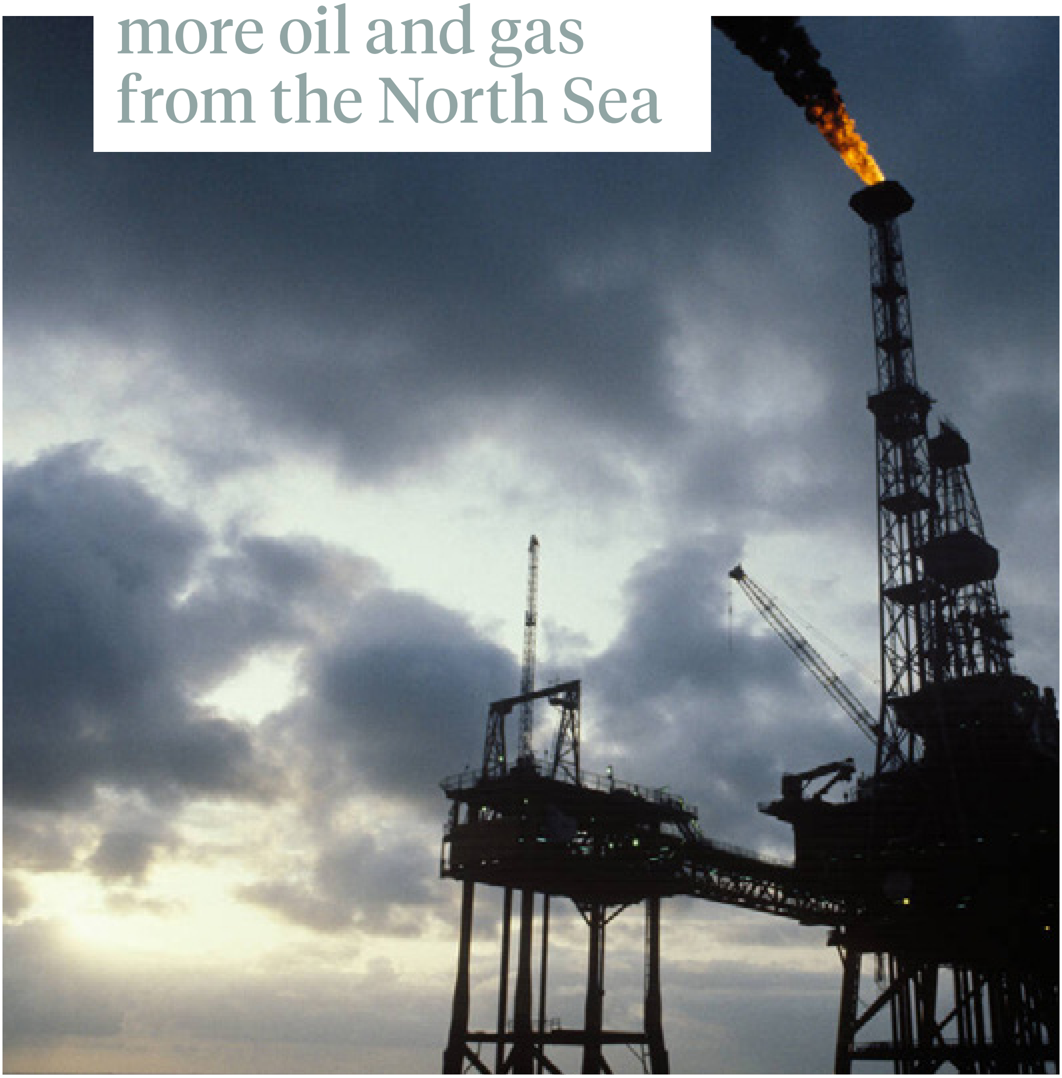
The last drop

Why it is not economic to extract more oil and gas from the North Sea



green alliance...

Introduction

The North Sea is a mature oil and gas basin, with high costs of extraction and declining reserves. According to the National Audit Office, "reserves are running out, with the remaining oil and gas becoming harder to find and extract".[1] For example, West of Shetland projects, such as the much publicised Cambo proposal, are very technically complex and are, therefore, expensive in a challenging offshore environment.

In this report, we explore whether it makes economic sense to attempt to extract the last drop of oil and gas from the North Sea.

How the government skews the market

> "The UK government tips the scales in favour of more extraction through tax reliefs and subsidies."

Government ministers state that decisions about the economic viability of oil and gas extraction in the North Sea, and the risk of stranding assets, are up to private investors and companies, based on price signals in the market.[2] This may be fair in a free market, but the oil and gas market is far from free. The UK government tips the scales in favour of more extraction through tax reliefs and subsidies.[3]

Oil and gas companies have been operating in the North Sea under a special tax regime since 1975.[4] The current tax system was designed in the wake of a market driven exodus from the basin in 2014-15, due to an oil price crash. The purpose of this new regime was to distort the market and provide an incentive for investment in the otherwise unprofitable British North Sea, using low tax rates and substantial tax reliefs. For example, in 2016, the Petroleum Revenue Tax on profits from oil and gas companies on the UK continental shelf was set to zero, and a tax on profits, called the Supplementary Charge, was reduced from 32 per cent in 2011 to ten per cent in 2016. [5,6]

Corporation tax can be claimed back through a system of generous tax reliefs for expenditure, including research, building new infrastructure and decommissioning old equipment. Almost 100 per cent of the money spent on new infrastructure for oil and gas companies can be claimed as tax relief.[7]

Between 2016 and 2020, oil and gas companies received £9.9 billion in tax relief for new exploration and production, and £3.7 billion in tax relief for decommissioning costs.[8]

As a result of all these tax reliefs and subsidies, the UK has one of the most skewed tax environments in the world for oil and gas production. In 2019, the UK government received less than $2 per barrel of oil in tax, compared to nearly $22 per barrel in Norway.[9] International oil majors are being paid by the UK to operate in the North Sea. In 2019, BP's North Sea operations paid an effective tax rate of minus 54 per cent.[10] In total, since 2015, the UK government has made net payments to ExxonMobil, BP and Shell totalling £1.25 billion.[11]

UK government taxes received per barrel of oil in 2019 were less than 10 per cent of those received by Norway's[12]

> **"By shifting decommissioning costs onto taxpayers, the government is subsidising the risk of stranded assets."**

By distorting the market, the government is hiding price signals from investors. The clearest example of this is in decommissioning tax reliefs, which the Treasury describes as "far more generous than is available in other industries".[13] The Oil and Gas Authority (OGA) estimates the total cost of decommissioning oil and gas infrastructure in the North Sea will be £46 billion but, given the tax reliefs, HMRC estimates that £18.3 billion of that will be paid by UK taxpayers.[14,15] By shifting decommissioning costs onto taxpayers, the government is subsidising the risk of stranded assets, as taxpayers would foot a significant share of the bill if oil and gas fields ceased to be economically viable. This risk is not unlikely for long term projects in the costly North Sea basin. While oil and gas prices are high today, the underlying trend is one of price volatility.[16] The fundamental vulnerability of the industry to volatile prices, due to the high cost of production in the basin, exposed in 2014-15, has not gone away.[17]

The reality of climate change, and the global transition to clean technologies, will also add to the risk of assets and jobs becoming stranded. Rather than ensuring investors can futureproof decisions,and provide long term job security in new industries like offshore wind, the state is preventing the private sector from accurately pricing in the full risks associated with oil and gas infrastructure.

Explainer
The tax regime for UK oil and gas producers

Tax	Tax rate (since 2016)	Tax relief
Petroleum Revenue Tax (PRT)	0	100% for decommissioning expenditure, can be set against profits from previous years, leading to tax rebates[18]
Ring Fence Corporation Tax (RFCT)	30%	100% for first year capital allowances (in most cases), research and decommissioning expenditure[19]
Supplementary Charge (SC)	10%	Investment Allowance of 62.5% for investment expenditure[20]

Petroleum Revenue Tax and reliefs
This is a field-based tax on profits from oil and gas production from fields licensed before 1993, and was previously set to 50 per cent.[21] It was permanently zero-rated in 2016, but companies are still able to claim tax reliefs for decommissioning expenditure against previous tax payments.[22] This leads to tax refunds being given to oil and gas companies, with HMRC projected to pay out £200-300 million a year between now and 2026.[23]

Ring Fence Corporation Tax and reliefs
Corporation tax, which applies to all companies, has a 'ring fence' for oil and gas companies operating in the North Sea to prevent taxable profits being reduced. This has been set at 30 per cent since 2008.[24] Ring Fence Corporation Tax relief can be claimed against first year capital allowances for plant and machinery, encouraging further infrastructure investment, as well as decommissioning expenditure. In 2019, oil and gas companies received £2.15 billion in Ring Fence Corporation Tax relief for new infrastructure and £815 million for decommissioning.[25]

Supplementary Charge and reliefs
There is an additional charge on the ring fenced profits of oil and gas companies operating in the North Sea, set at 10 per cent since 2016.[26] The Investment Allowance, introduced in 2015, reduces the amount of profits subject to this Supplementary Charge, giving further reliefs for capital investment, operating and leasing expenditure.[27]

Who benefits?

> “It is likely that North Sea oil and gas production will become a significant annual expenditure for the government, rather than a source of income.”

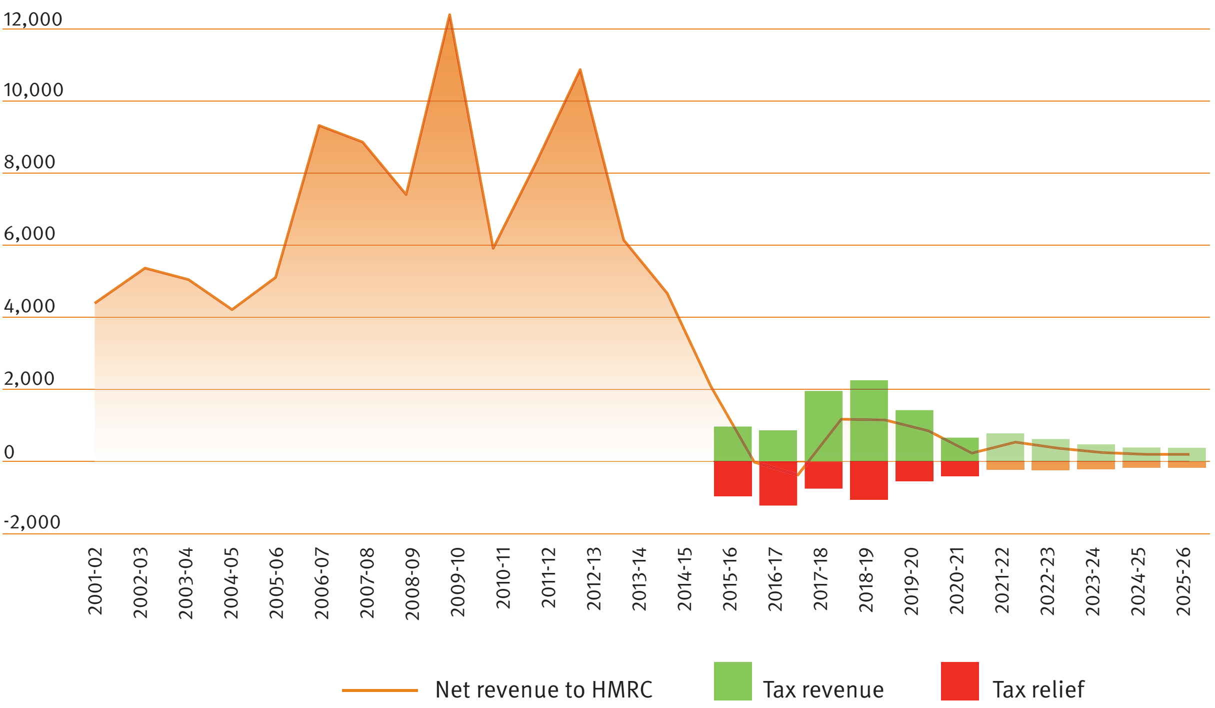
The UK government argues that intervention is justified to maximise the economic recovery of oil and gas from the North Sea basin. But, given the generous tax and subsidy regime, it is relevant to ask, economic for whom?[28]

Not the Treasury

Historically, the oil and gas industry in the North Sea provided significant revenue for the UK government. At its peak, it was over £12 billion a year. But, from 2013, that amount has declined so significantly that HMRC made a net loss from the oil and gas industry between 2015 and 2017. Over those two years, the UK government paid oil and gas companies £361 million.[29] While revenues are now positive, they are projected to decline again as the North Sea basin matures and the remaining reserves become harder to extract.[30]

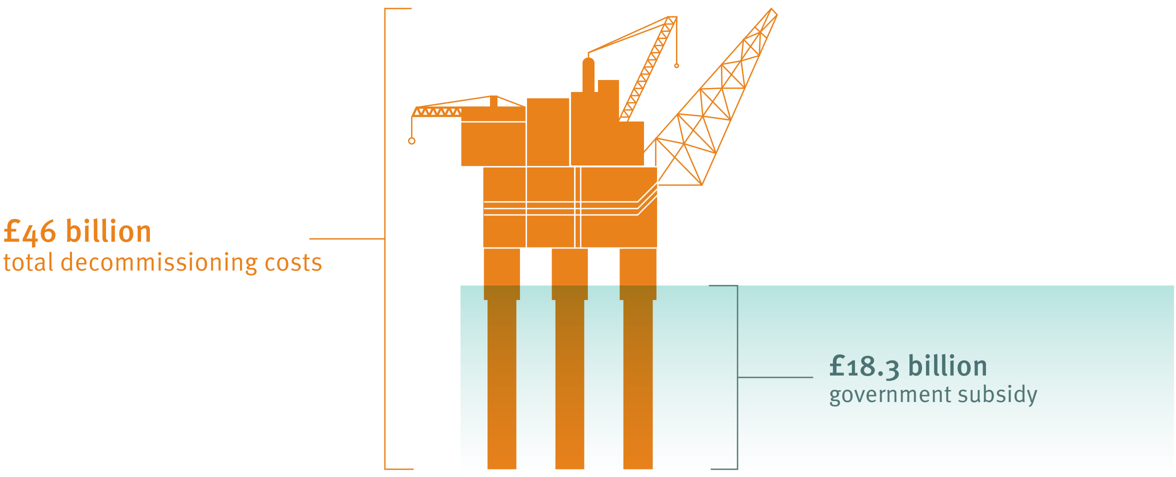
At the same time, the amount the government pays out to oil and gas companies in decommissioning tax relief is only going to increase as old rigs reach the end of their operational lives. Already, decommissioning costs, as a proportion of operating costs, have grown from five per cent in 2010 to 15 per cent in 2017, and the OGA has warned that they may increase further.[31] It is likely that North Sea oil and gas production will become a significant annual expenditure for the government, rather than a source of income.[32] The more new extraction is permitted in an increasingly challenging high cost basin, the more UK taxpayers will be locked into paying for decommissioning costs, in return for declining revenues.

UK oil and gas revenues are low and declining[33,34]



Forty per cent of the cost of decommissioning oil and gas infrastructure in the North Sea will be paid by taxpayers[35]

Total cost of UK North Sea oil and gas infrastructure decommissioning, 2022-2066



Not UK consumers

Some argue that a domestic oil and gas industry is necessary for the UK's energy security. However, North Sea oil and gas assets are privately owned by international companies who follow market logic and sell wherever the price is highest, within global and regional markets.[36] Despite being a net importer of oil, the UK exports 78 per cent of the oil extracted in the North Sea, as it is in the wrong form to be directly used domestically.[37] For example, oil from the West of Shetland region is too heavy and thick for petrol, aviation fuel or other high value products consumed in the UK, so it is exported before it reaches a UK refinery.[38] Around half of the oil refined in the UK is also exported.[39]

> **"With UK consumers suffering record high energy bills, oil and gas majors made record profits in 2021."**

UK production does not have a significant impact on consumer energy prices, given the private ownership of North Sea oil and gas assets and the connection to global and regional markets. For example, there were record exports of gas to Europe in September 2021, despite a gas price spike in the UK.[40] And, with UK consumers suffering record high energy bills, oil and gas majors made record profits in 2021, with BP's reaching an eight year high of £9.45 billion and Shell's at $19.3 billion.[41,42]

Crucially, the current gas price crisis is part of a long term trend of highly volatile prices, so continued reliance on oil and gas will repeatedly expose UK consumers to price spikes. Extraction volumes from the North Sea will never be large enough to meaningfully impact gas prices in the UK without an export ban. Unless the government proposes to nationalise gas production, the logical solution is to move away from unpredictable fossil fuel markets towards cheaper renewable energy.

New investments are at high risk of being stranded

> "Opening up new fields in the North Sea in a world of falling oil and gas demand risks locking UK taxpayers into expensive long term commitments."

Avoiding uneconomic decisions by the private sector in the North Sea – the consequences of which ultimately fall on all of us as taxpayers – is crucial in the context of new oil and gas development and licences. The transition to clean technologies will see fossil fuel demand fall rapidly: renewables already provide the "cheapest electricity in history", the shift to electric vehicles is happening faster than expected and green hydrogen, made from renewables, could be more competitive than blue hydrogen, made using gas, by 2030.[43,44,45]

New fields in the North Sea require, on average, 28 years from being granted a licence to beginning production, meaning licences granted in 2022 would not come online until 2050.[46] Given there is very likely to be significantly reduced global demand for oil and gas by 2050, UK oil and gas extraction would need to out compete production elsewhere to remain viable, which is unlikely as the North Sea is a declining, high cost basin in which to operate.

Opening up new fields in the North Sea in a world of falling oil and gas demand risks locking UK taxpayers into expensive long term commitments, either through an ever more skewed tax system, with the UK government seeking to subsidise high cost production, or by footing the bill for the early decommissioning of uncompetitive fields.

The private sector should be exposed to accurate market signals

> **"The government is pursuing a policy that is no longer economic for the Treasury, taxpayers or consumers."**

The government is pursuing a policy that is no longer economic for the Treasury, taxpayers or consumers. The case for avoiding market distortions is clear. North Sea oil and gas are expected to become significant sources of expenditure, rather than revenue, UK households are likely to continue to be exposed to price volatility and there is a high risk of stranded assets, as global economies make the shift to clean technologies.

Tax regime and decommissioning costs

To clarify the true cost of new extraction, the government should remove its generous tax reliefs and subsidies for all new licences and developments, thus providing more accurate price signals on the future of the North Sea basin for investors.

Decommissioning costs

To ensure decommissioning costs are met by the private sector, rather than taxpayers footing the bill in the event of insolvencies, operators should be required to pay a bond covering expected costs upfront. The size of the bond should be regularly reviewed to account for changes in cost estimates. The shift in the North Sea away from large operators like Shell and BP towards small, private equity funded companies makes it much more important that the potential costs of stranded assets are not passed onto the state, if those companies go bust.[47]

Climate compatibility

The forthcoming Climate Compatibility Checkpoint presents a risk of biasing the market further: this will signal the government's view on whether new oil and gas extraction is compatible with the UK's commitments under the Paris climate agreement. This matters because, as the International Energy Agency has made clear, global fossil fuel production must decline. And, to be within a 50 per cent chance of staying below 1.5°C, no new developments and licences can be granted globally after 2021.[48]

Private sector investors may conclude that, having passed a climate compatibility checkpoint – even a weak or inadequate one – the state has determined that new UK oil or gas development is somehow exempt from this global trend. At a minimum, this may bias private investment decisions towards over optimistic investment in risky fossil fuel extraction.

> **"It is crucial that the government aligns its policy on North Sea oil and gas with economic realities."**

It is crucial that the government aligns its policy on North Sea oil and gas with economic realities. Removing tax reliefs and subsidies for new developments and licences would make the true implications of investing in new oil and gas in the North Sea explicit. This would not lead to production ceasing overnight. There is sufficient oil and gas in existing fields in the North Sea to continue current production plans to 2030.[49] However, it would prevent the burden of uneconomic new developments falling on UK taxpayers.

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Green Alliance
18th Floor
Millbank Tower
21-24 Millbank
London SW1P 4QP

020 7233 7433
ga@green-alliance.org.uk

w ww.green-alliance.org.uk
@GreenAllianceUK
blog: www.greenallianceblog.org.uk

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Authors
Heather Plumpton, Caterina Brandmayr and Dustin Benton

Supported by the Marmot Charitable Trust

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The Green Alliance Trust
Registered charity no 1045395
Company limited by guarantee
(England and Wales) no. 3037633

Published by Green Alliance
February 2022

ISBN 978-1-912393-70-1

Designed by Howdy