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WHAT ARE THE BROADER IMPACTS OF A MORE SUPPORTIVE NORTH SEA OIL AND GAS ENVIRONMENT?

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What are the broader impacts of a more supportive North Sea oil and gas environment?

- Our previous briefing considered whether more North Sea oil and gas production would lower prices or improve energy resilience, and concluded that the effects would be limited.
- That is not the end of the story. A more supportive licensing, regulatory and fiscal environment could still have wider economic, fiscal and carbon effects. Here we focus on four questions: what would it mean for growth, jobs and transition; what would it mean for tax revenues; what would it mean for emissions; and how should these considerations be weighed against the UK's climate leadership ambitions?
- On economic growth, more activity in oil and gas would not automatically mean faster growth overall. However, a more supportive regime could slow the decline of activity in the upstream sectors and their supply chains, and potentially ease the transition to low-carbon sector jobs for workers with transferable skills (avoiding the risk of loss of skilled workers or the disruption associated with a very rapid transition).
- More production could support higher tax revenues, although this depends on the design of the tax regime and the investment incentives it creates.
- UK domestic gas has fewer embedded emissions than LNG, but more than some pipeline imports, so the carbon impact depends on what increased production would displace. Globally, it seems likely that more UK production of oil or gas would reduce emissions.
- Against these potential benefits sits international climate leadership, and the argument that stopping new oil and gas production encourages others to do the same. There is a real trade-off. But the debate should focus on the real economic, fiscal and energy system costs of foregoing additional domestic production, and policy should be based on a clear-eyed assessment of whether this particular route to leadership should remain a priority. In relation to this particular question, discussions of price and direct emissions impact are a distraction.

Our previous briefing on the topic of the future of North Sea oil and gas production focused on the impact of increased production on prices and supply resilience, and concluded that it was unlikely that increased production would have a material effect on prices or a structural effect on resilience.

But this is not the end of the story. A more supportive licensing, regulatory and fiscal environment could have economic, fiscal and carbon consequences of its own. It could slow the decline of economic activity in the UK's upstream oil and gas sector, support jobs, skills and supply chains, and raise tax revenues. It might also, at least for gas, reduce emissions relative to some imported alternatives. Against that sits a different objective: international climate leadership, and the argument that countries such as the UK should stop opening up new oil and gas production in order to encourage others to do the same.

In this second briefing, we consider these issues. We conclude that the key policy judgement is not whether restraining new oil and gas production has a value in terms of international leadership, but whether the costs and benefits remain proportionate in current conditions.

A more supportive regime might aid growth and smooth transition to low-carbon sectors

Let's turn first to growth, the government's overriding priority. A less restrictive environment for North Sea production is not going to restore the basin to its past scale. But it could support economic activity: more field development, more production, and more work across the associated supply chains, including operations, maintenance, logistics and ports.

That matters because the sector is still material. Oil and gas extraction accounted for around £19 billion of GVA in 2025, or roughly 0.7% of total UK GVA.[1] The sector's GVA is also positively correlated with commodity prices as well as volumes, meaning that its contribution during periods of high prices has been significant relative to recent history.

Figure 5: Historic GVA of the oil and gas extraction sector (1999 – 2025)

Source: ONS

The sector is also a significant employer. Government figures suggest that oil and gas extraction employed around 12,000 people at the start of 2025.[2]

1 Office for National Statistics (2026), GDP output approach – low-level aggregates, available at: https://www.ons.gov.uk/economy/grossdomesticproductgdp/datasets/ukgdpolowlevelaggregates

2 Department for Business and Trade (2025), *Business population estimates for the UK and regions 2025: statistical release*. Available at http://www.gov.uk/government/statistics/business-population-estimates-2025/business-population-estimates-for-the-uk-and-regions-2025-statistical-release

But more activity in one sector is not automatically the same thing as more economic growth overall. In an economy where resources are efficiently allocated, more North Sea production may mean less activity elsewhere. Whether a more supportive regime adds to growth therefore depends on what the alternatives are. And at the current market price for carbon, those alternatives are not always attractive to investors in the short term, even if they may have greater longer term promise.

The growth case is stronger where the relevant labour and capital would otherwise be under-used, or where a slower decline helps avoid costly adjustment frictions. That may be particularly relevant in places where the oil and gas sectors remain locally important, and where alternative employment opportunities are weaker or might be slower to emerge.

Slowing the decline of the basin may slow the flow of resources into sectors with stronger long-term prospects, including low-carbon industries. The ONS estimates that the UK's low-carbon and renewable energy economy employed around 304,000 people in 2024, an increase of 41% from 2020.[3] That growth is encouraging. To support future growth, sufficient resources need to be available to the sector, including redeployed capital and labour from the declining oil and gas sector.

Evidence from the Government's Clean Power 2030 Action Plan suggests there is strong potential for workforce transition: the oil and gas sectors show similarity scores above 0.5 with many clean energy sectors (where 0 indicates no overlap, and 1 indicates full overlap), indicating a meaningful degree of transferable skills.[4]

Table 1: Similarity of skills demanded across oil and gas and clean energy sectors

Sector	Overlap
Wind	0.58
CCUS	0.57
Hydrogen	0.54
Nuclear	0.54
Electricity Networks	0.45
Solar	0.43
Smart Systems and Storage Flexibility	0.42
Heat and Buildings	0.22

Source: DESNZ

Note: The figures reflect cosine similarity scores. This analysis is based on the similarity of skills derived from Lightcast online job advertisements between 2021 and 2024.

3 Office for National Statistics (2026), *Low carbon and renewable energy economy, UK: 2024*. Available online at https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/finalestimates/2024

4 Department for Energy Security and Net Zero (2024), *Clean Power 2030 Action Plan: A new era of clean electricity, Assessment of the Clean Energy Skills Challenge Evidence Annex*. The analysis compares skills across sectors using job advert data and measures similarity using cosine similarity scores between 0 and 1. Available online at https://www.gov.uk/government/publications/clean-power-2030-action-plan-assessment-of-the-clean-energy-skills-challenge

However, a more gradual decline in upstream oil and gas activity could still make economic sense if it gives those sectors more closely matched in terms of skill requirements, such as carbon capture, hydrogen and offshore renewables, more time to train and absorb workers with transferable skills.

Looking geographically, the transition is associated with economic adjustments in regions linked to the North Sea basin. Around 72% of oil and gas employment in the UK is concentrated in Scotland,[5] accounts for approximately 12% of economic activity in the region.[6]

In 2024, the oil and gas extraction sector employed 9,000 people in Scotland, compared to 11,300 employed in the offshore wind, onshore wind, carbon capture storage and alternative fuels sectors.[7] This means that the green economy sectors with a closer skills overlap would need to grow significantly to accommodate this volume of oil and gas workers. This will take time. A more gradual transition pathway could therefore help mitigate local economic impacts while supporting the build-out of low-carbon industries, and contribute to a smoother overall growth adjustment.

The conclusion on growth is therefore far from certain. A more supportive regime could enable more activity in oil and gas and its supply chain. Whether that translates into more growth depends on what would otherwise happen to the people and capital involved. But a slower transition could ease the pain of change for a significant number of workers, and reduce the risk of loss of relevant skills for the low carbon economy including through relocation to other countries, given the global and project-based nature of oil and gas employment and the mobility of its workforce.

A more supportive regime might lead to higher tax receipts

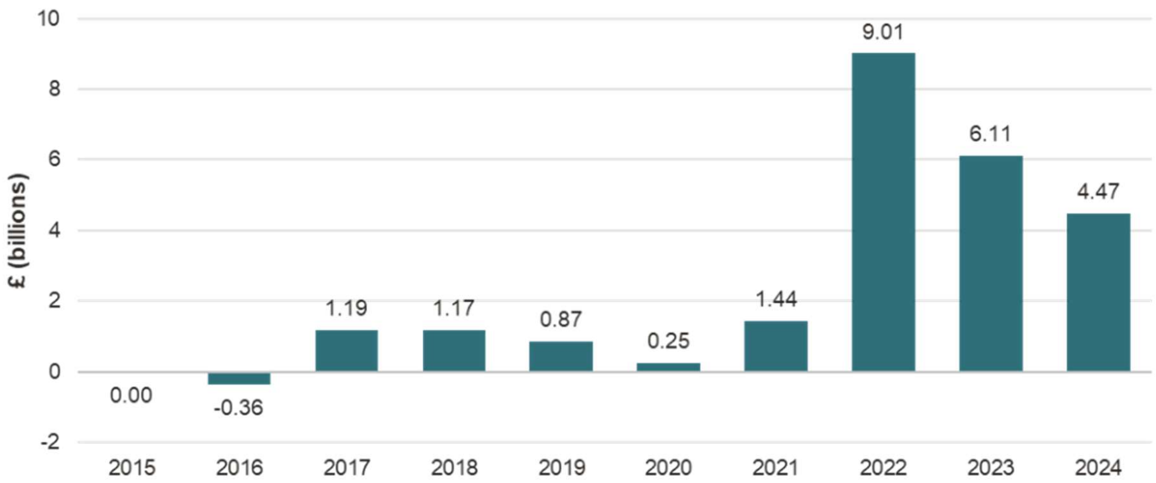
The fiscal case for more activity is straightforward in principle. More North Sea production should, other things equal, support more tax revenue. Those revenues are likely to arrive more quickly than some lower-carbon sectors, where the tax receipts are often lower, more back-loaded, and where projects may also rely on public support during deployment.

5 Nomis (2024), Business Register and Employment Survey, available at: https://www.nomisweb.co.uk/datasets/newbres6pub

6 In 2022, the extraction of oil and gas alone was worth an estimated £25.2 billion in GVA to the Scottish economy, representing 11.8% of total Scottish GDP. Scottish Government (2024), *Oil and gas.* Available at: https://www.gov.scot/policies/oil-and-gas

7 Office for National Statistics (2025), Business Register and Employment Survey (BRES): provisional results 2024, revised results 2023. Available at: https://www.ons.gov.uk/releases/ukbusinessregisterandemploymentsurveybresprovisionalresults2024revisedresults2023

Figure 7: Net tax revenues from UK oil and gas production



Source: HMRC National Statistics

Oil and gas tax receipts were close to zero, or even negative, in the late 2010s. They surged after the Ukraine-related price shock and the introduction of the Energy Profits Levy, and have fallen back as prices eased. They appear likely to increase again with the impact of the Iran crisis on prices. In many ways the receipts are a natural hedge to pressures on the public purse to support vulnerable customers with fuel bills. And at a time when the UK fiscal position is tight, the sums involved are not trivial.

But securing higher production might, in itself, require changes to tax regimes. The headline receipts numbers above mask a complex tax landscape: in 2024-25, the £4.5 billion total was made up of £2.0 billion of Offshore Corporation Tax, £2.9 billion of Energy Profits Levy, and -£0.4 billion of Petroleum Revenue Tax.[8]

The challenge is about working out how to maximise revenue over time. This is in part about headline rates: a regime that takes more from each pound of profit may still raise less money overall if it materially discourages investment and shrinks the taxable base. But it is also about the structure of the different regimes and the incentives (e.g. for further investment) which they create.

A more supportive regime may help avoid embedded carbon emissions

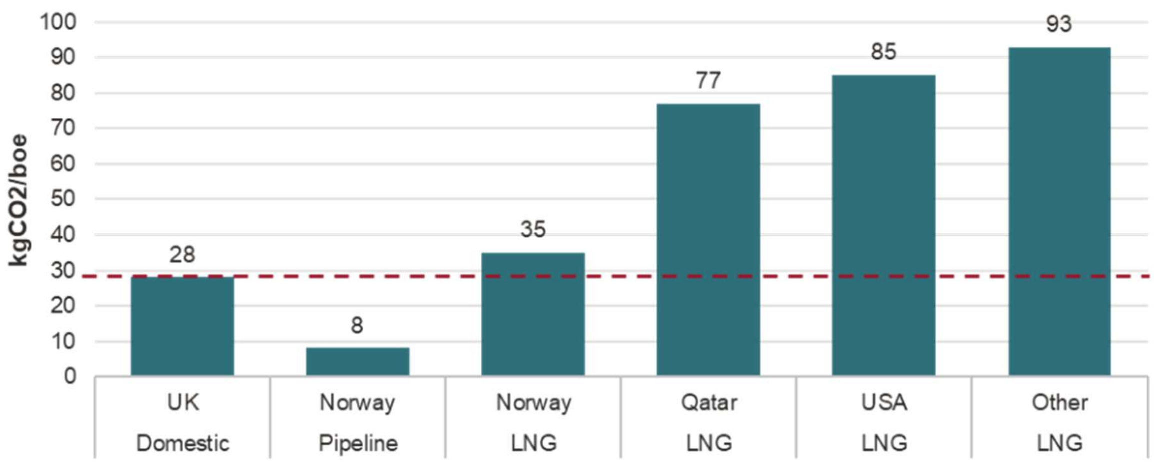
If more production does not materially alter prices, then it is arguably unlikely to have a major effect on UK consumption of oil and gas in the short to medium term. From a climate policy perspective, the question then relates to embedded emissions: is domestic production more or less emissions-intensive than what it displaces?

8 HM Revenue & Customs (2025), *Government revenues from UK oil and gas production.* Available online at https://www.gov.uk/government/statistics/government-revenues-from-uk-oil-and-gas-production--2

This can be measured in two ways. First, in relation to the embedded emissions of fuels consumed in the UK, and second (and more importantly), globally.

Looking first at the UK, the stronger case is in relation to gas. The NSTA says that the average emissions intensity of UK domestic gas was 28 kgCO2e per boe in 2024, with pipeline gas imports at 8 kgCO2e per boe and LNG at 85 kgCO2e per boe (including production, processing, liquefaction, shipping and regasification).[9] On these figures, UKCS gas has materially lower emissions than LNG, but not than other pipeline gas imports (see Figure 7).

Figure 8: UK gas supply emissions intensity by source



Source: Frontier Economics based on information from the NSTA

The carbon case for more domestic gas therefore depends on what imports it would displace at the margin (and on whether domestic producers are required to reduce production emissions from new sources, for example by using low carbon sources to power production facilities). At today's emissions intensities, if higher UK production materialises in 2030 and displaces LNG imports, this could reduce emissions by around 4.34 $MtCO_2e$, equivalent to 4% of emissions from gas consumption[10].

For oil, the argument is weaker and more complicated. Crude is globally traded, and a large share of UK crude output is exported. That means the link between domestic crude production and the refined products ultimately consumed in the UK is looser than it is for gas.

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9 North Sea Transition Authority (2025), Emissions intensity of producing natural gas, September. Available at: https://www.nstauthority.co.uk/media/nupk5sx1/emissions-intensity-of-producing-natural-gas-factsheet-sept-2025.pdf

10 This reflects the difference between OEUK and NSTA production assumptions in 2030 as reported in OEUK (2026), where LNG imports fall from around 14 bcm (NSTA) to 2 bcm (OEUK) to meet demand of 52 bcm. Emissions are calculated using average LNG import intensity of 85 $ktCO_2e$/mmboe (NSTA, 2025) and domestic production intensity of 28 $ktCO_2e$/mmboe. North Sea Transition Authority (2025), *Emissions intensity of producing natural gas*, September. Available at: Emissions intensity of producing natural gas factsheet

In any case, the more important question relates to the global position. Production of more oil and gas in the UK should result (for similar global demand levels) in avoided production (and possibly processing and transport) somewhere else. What matters is whether the embedded carbon in the UK's production is lower than that in the displaced supply source. It seems likely that increased production will result in lower production from jurisdictions with higher fugitive emissions, or lower processing and transport emissions.

Against those considerations, the benefits of international climate leadership must be weighed

The logic of international climate leadership is valid. If countries with the capacity to produce oil and gas decide not to open up new areas of production, that can help strengthen international norms around limiting future fossil fuel extraction. This logic underpins the UK's current policy not to issue new licences to explore new fields, while managing existing fields for the rest of their lives.

The UK is not alone. France adopted a law in 2017 ending new hydrocarbon permits and phasing out exploration and exploitation by 2040[11].Denmark agreed in 2020 to cancel future licensing rounds and phase out production by 2050[12]. And Ireland committed in 2021 to legislate against new oil and natural gas exploration and extraction.[13] More broadly, members of the Beyond Oil and Gas Alliance, commit to ending new concessions, licensing or leasing rounds and setting a Paris-aligned end date for existing production.

The key point, however, is that leadership is not free. While it may not be relevant to discussions around energy prices, a less supportive environment may lead to a faster rate of decline in employment for workers currently in the sector and potentially more employment disruption in the transition to a low carbon economy, lower tax revenues, and some loss of resilience at the margin. It also might involve relying more heavily on higher-emissions production than would otherwise be necessary.

Leadership may still be worthwhile. But the potential costs need to be clearly identified, and the specific geopolitical situation we are in should be factored in. That is why this question should be treated as a question of proportionality rather than principle alone. The policy question is not whether restraint has a moral or political logic, and the right conclusion is not necessarily that international climate leadership should be abandoned. Instead, the debate should focus on the real economic, fiscal and energy system costs of foregoing additional

11 Climate Change Laws (2017), *France. Law no. 2017-1839 on the end of exploration and exploitation of hydrocarbons and diverse dispositions related to energy and the environment*, https://climate-laws.org/document/law-no-2017-1839-on-the-end-of-exploration-and-exploitation-of-hydrocarbons-and-diverse-dispositions-related-to-energy-and-the-environment_c16d

12 International Energy Agency (2024), *Denmark's oil and gas exploration ban*, https://www.iea.org/policies/17708-denmarks-oil-and-gas-exploration-ban

13 International Energy Agency (2021), *Climate Action and Low Carbon Development (Amendment) Act 2021 - Petroleum Exploration and Production in Ireland*, https://www.iea.org/policies/12877-climate-action-and-low-carbon-development-amendment-act-2021-petroleum-exploration-and-production-in-ireland

domestic production, and policy should be based on a clear-eyed assessment of whether this particular route to leadership should remain a priority, taking into account other possible forms of climate leadership (such as continuing to support the build out of low carbon sectors).

Key takeaways

A more supportive environment for North Sea oil and gas could still have material economic, fiscal and carbon impacts, even if the effects on prices and resilience are limited. The key questions are what it would mean for growth and jobs, what it would mean for tax revenues, what it would mean for emissions, and how these factors should be weighed against the UK's climate leadership ambitions.

On growth, the impact is uncertain. More activity in oil and gas would not automatically raise GDP overall, but it could slow the decline of upstream sectors and supply chains, and support a smoother transition for workers with skills that are transferable to low-carbon industries.

A more supportive regime could also support higher tax revenues, although that depends on the design of the fiscal regime and the investment incentives it creates.

The emissions case is mixed. UK gas has lower embedded emissions than LNG, but higher emissions than some pipeline imports, so the carbon impact depends on what increased domestic production would displace. At a global level, there is also a case that more UK production could displace higher-emissions supply elsewhere.

Against those potential benefits sits the UK's role in international climate leadership. There is a real trade-off. The debate should focus on the economic, fiscal and energy system costs of foregoing additional domestic production, and on whether this particular route to leadership remains proportionate in current conditions.

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