New oil and gas licences are just a distracting political stunt

This week's King's Speech included an announcement that oil and gas exploration licences are to be awarded on an annual basis.

Whether the industry needs or wants annual licence rounds is not clear. The Government, however, still claims that awarding more exploration licences will help to secure 200,000 oil and gas jobs as well as "reduce reliance on volatile international energy markets and hostile foreign regimes".

Against the backdrop of the wars in Ukraine and Palestine, and the energy price crisis, this sounds plausible – why wouldn't we seek to exploit our own energy sources? The reality, however, is that the extra licences will make very little difference to the projected rapid decline in production of North Sea oil and gas and the UK's increasing fossil fuel import dependency. It will definitely not secure 200,000 jobs in a terminally declining industry.

But while it makes no real difference to the UK's energy future, Regen director Johnny Gowdy argues that, for the sake of a few headlines and a pre-election booby-trap for labour, it does risk undermining our position as a climate change leader and distracting industry and policymakers from the real energy security and economic opportunity presented by low-carbon technologies.

Here he outlines five areas of controversy on the topic...

Controversy 1

Losing our international standing and influence for very little benefit

For a brief moment in time during COP26 in Glasgow, it seemed that the UK could become a leader and influencer in the global response to climate change. We had a good record for domestic emission reduction, a great story around offshore wind and a binding commitment to achieve net zero by 2050, with a high degree of cross-party consensus on how to get there.

Since then the Truss and Sunak governments have chipped away at this consensus and announced a number of policy changes that have undermined the UK's international standing as a climate change leader and our attractiveness for future energy investment.

New fossil fuel exploration licences are especially controversial. As the IPCC, IEA, Committee on Climate Change and many others have warned, the world cannot continue to develop and exploit

fossil fuel reserves and stay within our carbon emission limits. We have already passed the stage where we need to leave a high proportion of remaining fossil fuel resources in the ground.[1]

The problem, however, is that each individual oil and gas producer still has an incentive to maximise its own production and hope that others will be willing to cut theirs. The excuses – we still need oil and gas, our fossil fuel extraction is 'cleaner', energy security, jobs and tax revenues – are repeated by them all.

Rather than lead by example, by promising to expand exploration and development to 'max out'[2] our exploitation of North Sea resources, the UK has joined the list of petrostates which the UN has accused of increasing the 'production gap' above the threshold of fossil resources that can be exploited and still limit the devastating impact of global warming.

The frustration for many is that, unlike states that are wholly dependent on oil, the UK is not doing this for any significant economic or energy security benefit. As we will discuss later, oil and gas production is in a terminal decline because our resources are depleted, not because of a lack of exploration. New licences, which in many cases are for relinquishment[3] blocks , is just creating an unhelpful political noise that risks slowing down investment in the real energy transition.

Controversy 2

Is our gas really cleaner?

An argument that has been put forward in defence of further North Sea development is that our oil and gas is supposedly cleaner, so by displacing imports we can reduce our emissions.

We saw this argument made in July 2023, alongside the commitment made by the UK Government to increase new exploration licences and over the development of the Rosebank field. On July 31st, the North Sea Transition Authority (NSTA) led with a headline that "UK gas is four times cleaner than imports", which was factually incorrect on a number of levels, but nevertheless repeated by several government ministers. This was picked up by the BBC's More or Less, team who gave the headline a good mauling.

We also now know, thanks to an FOI-requested email chain,[4] that the NSTA headline was heavily orchestrated with the No 10 Press Office to coincide with the new licence announcements. This manipulation of data and messaging around energy policy is a worrying trend. The headline has now been amended by NSTA.

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[1] Studies have suggested that at least 60% of the remaining oil and gas reserves must remain unextracted if we are to maintain a 2 degrees global warming limit. https://www.nature.com/articles/s41586-021-03821-8

[2] Phase used by energy secretary Grant Shapps https://www.ft.com/content/407b834e-a503-4de9-acab-fcf88d76dbb3

[3] Relinquishment – previously licensed blocks which may have been assessed for hydrocarbons by previous licensees

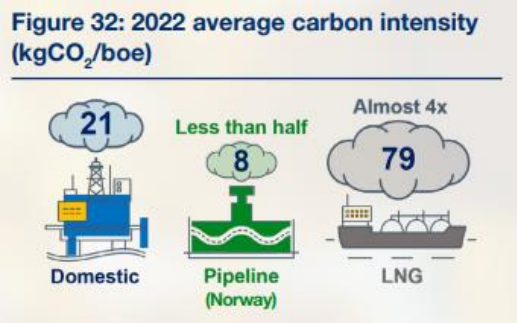
[4] Email from No 10 press office to NSTA on 18th July Subject: RE: gas footprint

"Thank you for this. I think an authorities report on the gas footprint for the end of this month would be very helpful. I will look out for the summary bullets."

Email from No 10 Press office to NSTA on 25th July Subject: 31 July energy announcements

"As I think you both know, we are still discussing the wording we can use regarding a commitment to future oil and gas licencing. That said, it will be important that we are joined up on how we both describe the licencing commitment and the gas emissions analysis that NSTA has undertaken."

In fact, according the NSTA's own figures, UK gas production and transportation has higher carbon emissions, at 21 kg/CO2e/boe, than our main import partner, Norway,[5] at 8 kg/CO2e/boe, and is slightly higher than average when compared to the basket of global producers.



UK gas production does, however, have lower emissions compared to imported LNG at 79 kg/CO2e/boe, which is where the misleading headline came from.

For oil it is not at all clear whether UK emissions are higher or lower than imports, and almost impossible to work out, given the international trade in crude. According to the rankings published by NSTA however, the UK is in the middle of the pack for oil and gas emissions, and slightly higher than the average at 19 kgCO2/boe.

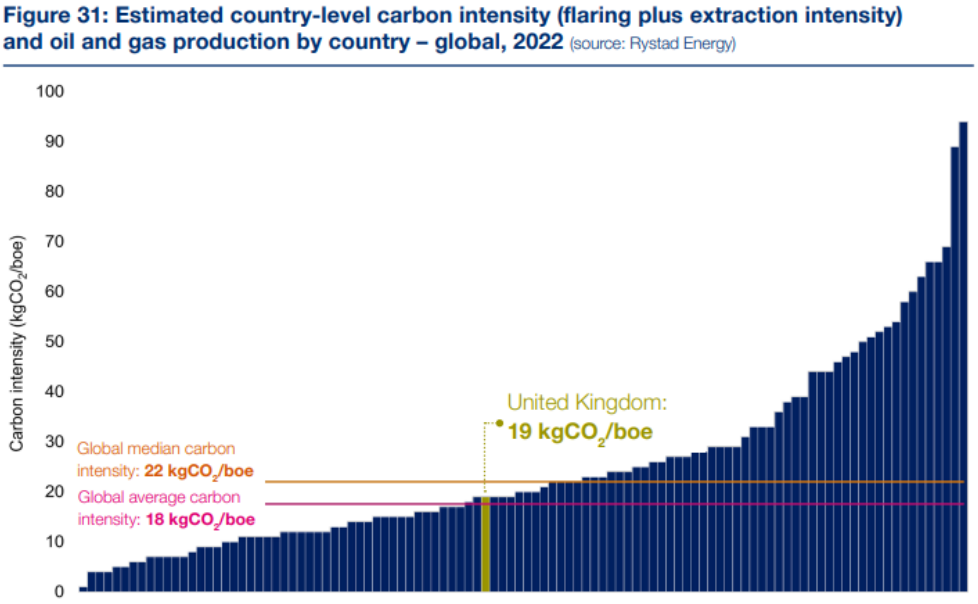


Figure 1 World ranking of global oil and gas production emissions. source Rystad Energy published by NSTA.

So, at best, we can say that the UK is not the dirtiest, but nor is it the cleanest source of oil and gas.

Controversy 3

The climate compatibility checkpoint and who gets to decide

The controversy about carbon emissions feeds into a wider argument about whether new oil and gas developments are compatible with the UK's climate change commitments and legally binding carbon-reduction targets – and who gets to decide if this is so.

[5] NSTA figures –https://www.nstauthority.co.uk/media/bicn5tva/nsta-emissions-monitoring-report-2023-final-accessible.pdf UK Gas emissions page 54

The argument being made is that, as long as the UK continues to require fossil fuels in its energy mix, oil and gas would be better coming from within the UK, especially if it can be shown that it has lower emissions compared to imports.

Putting aside the fact that UK oil and gas is not cleaner than imports (see above), this argument would only make sense if, at a global level, some other higher-emission producer was displaced. As it is, without a global agreement on fossil production limits, any increase in UK production is just adding to the total oil and gas production gap,[6] delaying the transition to net zero and sending the wrong message to other producer nations.

The nature of the checkpoint is itself controversial. In theory, it should be applied before each new licensing round[7] and, according to the Government's design document, should be evidence-based, transparent and simple, to give "confidence to all stakeholders that a clear and methodical process is being followed". So far, we have not seen the checkpoint in action and it is unclear how and when it will be introduced.

The proposed checkpoint applies three main tests:

1. **Reductions in operational greenhouse gas emission** from the sector, vs commitments. Is the UK oil and gas sector meeting the emissions targets set out by the North Sea Transition Deal to cut emissions by 50% by 2030?
2. **Operational greenhouse gas emissions intensity** from the sector, benchmarked internationally.
3. **Status of the UK as a net importer of oil and gas.** An evaluation of whether the UK will continue to need oil and gas.

At first glance these tests seem reasonable, but in reality they are extremely weak. Test 1 can in large part be achieved by the expected fall in production. Test 2 is a benchmark but there is no threshold set. And test 3 has already been pasted in because it has been determined that the UK's import dependency for oil and gas will continue and deepen, until we reduce demand.

Then, to muddy the waters further, the Government has also thrown in some additional criteria which are "beyond the scope of this checkpoint and may include": the contribution to UK economy, jobs supported, tax revenue contributed, investment climate, energy supplied and energy security.

So there is plenty of scope to fudge the checkpoint between emission reduction and wider national priorities. It is also unclear how and when the checkpoint will be implemented; although it is claimed by NSTA that the latest (33rd) licensing round has been "formulated in compliance with the Climate Compatibility Checkpoint" design, there is no documentation currently published to show how this has been assessed.[8]

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[6] The Production Gap between the level of proposed fossil fuel production above what can still be harnessed within climate change targets see https://productiongap.org/

[7] Climate Compatibility Checkpoint Design https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1105667/climate-change-checkpoint-design.pdf

[8] Regen has asked NSTA for any compatibility assessment that has been made for the 33rd licensing round, NSTA has responded to say that this question should be directed to government who "administer" the checkpoint

Perhaps more concerning, the checkpoint "does not have a legislative basis" and it is not clear who actually has responsibility for performing and publishing it. The checkpoint design documents suggest that responsibility for gathering the evidence, performing the checkpoint and ultimately "the final decision on whether to launch a new round" has been delegated by ministers to the NSTA – the same body that gave us the "UK gas is four times cleaner" headline and has recently been criticised for refusing to release environmental data related to Shell's Brent field decommissioning plans.[9]

Formerly the Oil and Gas Authority, NSTA is wholly owned by Government and is described on its website as a 'regulator, 'an influencer' and an 'authority'. It is, however, "not formally controlled by government ministers". It could be described as a QUANGO that operates with a high degree of autonomy. NSTA, nevertheless, has a huge amount of power to award new licences and also, it seems, to determine whether licence rounds meet the climate compatibility checkpoint and, by extension, whether the development of fossil fuels is aligned with the UK's legally binding net zero targets.

To give an example of this autonomy, when Regen raised the "four times cleaner" carbon emission headline with the Office for Statistics Regulation(OSR), we were told: *"As NSTA is not a producer of official statistics, your concerns unfortunately fall outside of our remit."*

However, perhaps as surprised as we were, the OSR told Regen that it had *"decided to contact the Department for Energy Security and Net Zero to ask whether it has considered the need for a similar measure to be produced as an official statistic. This would mean such a figure would need to be supported by a published methodology and a discussion of any strengths and limitations it might have."*

The NSTA website and publication do show that the transition to net zero, and the decarbonisation of the oil and gas sector, is one of its primary objectives, alongside the goal to maximise the economic and energy potential of the UK Continental Shelf (UKCS). Against this objective, NSTA claims to be making good progress with a headline in its latest emissions report[5] that total UKCS emissions have dropped by **23% between 2018 and 2022**. This sounds good, and is on track to meet the 50% cut by 2030, but then UK production has also fallen over the same period, so the actual emission carbon intensity, per unit of fossil fuels produced, has fallen by **a more modest 5.9%**.[10] Against falling production it really should be the carbon intensity that is the main decarbonisation performance indicator.

[9] https://www.energyvoice.com/oilandgas/north-sea/decom/540006/nsta-faces-legal-hearing-over-disclosure-of-brent-decom-paperwork/

[10] Total UKCS Carbon Intensity fells from 25.5 kgCO2e/boe in 2018 to 24 kgCO2e/boe in 2022. A 7.9% fall. See https://www.nstauthority.co.uk/media/bicn5tva/nsta-emissions-monitoring-report-2023-final-accessible.pdf Page 48

Figure 26: Offshore and total (offshore plus terminals) industry carbon and GHG intensity, 2018–2022
(sources: NAEI, NSTA, EU ETS, UK ETS)

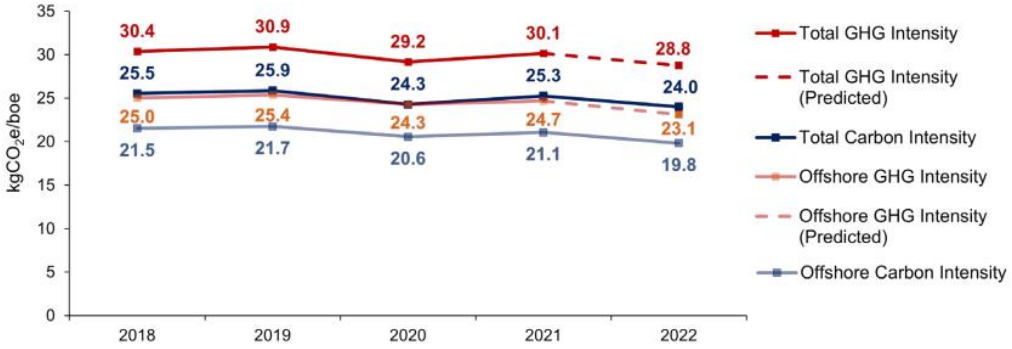


Figure 2 UKCS carbon and greenhouse gas intensity, 2018-2022. Source NSTA.

This link between UKCS production and carbon intensity is going to become more important. On the plus-side it does seem that the North Sea sector has reduced flaring (helped perhaps by the rising gas prices) and is taking some tentative steps to use low-carbon energy, although it is still a long way behind our neighbours in Norway. New fields also, in theory, offer the opportunity to make new investments and to adopt the latest low-carbon technology. The challenge, however, is that as production inevitably falls, the industry will lose economies of scale and could see emission intensity rise again as fixed assets and operations deliver fewer units of energy.

There is a question, perhaps for the next Government to address, as to whether an arms-length body like the NSTA, which has a set of potentially conflicting objectives, should be tasked with delivering licensing rounds as well as monitoring industry decarbonisation and the climate compatibility check. As a minimum, some greater level of transparency and oversight is needed, with the climate compatibility checkpoint sitting within a government department.[11]

Controversy 4

Will new licences add to the UK's energy security?

Energy security is now the most cited reason why the UK government proposes to increase North Sea exploration licences. This is supported with a conflated point about security of supply and about reducing the UK's exposure to volatile energy markets and high prices. The King's Speech repeated this claim that new licence rounds would "reduce reliance on volatile international energy markets and hostile foreign regimes".

Of course, given the horrific events in Ukraine and now in the Middle East, resulting in a very steep rise in global gas prices, it would seem to make sense to expand the UK fossil fuel production as fast as possible to reduce our exposure to global energy markets.

But the reality is different. The UK is already a net importer of both oil and gas (and petroleum products) and trades for these commodities on the open market. The UK's ability, as a nation state

[11] The Committee on Climate Change has made the same point in its June 2023 progress report https://www.theccc.org.uk/wp-content/uploads/2023/06/Progress-in-reducing-UK-emissions-2023-Report-to-Parliament.pdf

but without a state-owned oil and gas company, to affect commodity prices is very limited[12] and this fact will certainly not be improved by the issue of new oil and gas exploration licences.

The story of natural gas in the UK is one of falling demand – from 1,125 TWh in 2000 to 781 TWh in 2022 – and an even steeper fall in production, from a peak of over 1,260 TWh in 2000 to just 423 TWh in 2022. As a result, the UK was a significant net importer of 358 TWh of gas in 2022 – the equivalent to 46% of demand.

UK natural gas commodity balances 2022

Source Digest of UK Energy Statistics Ch. 3

UK Gas balances 2022	TWh	% of Demand
UK Gas Domestic Demand	781	
UK Gas Production	423	54%
UK Gas Imports	618	79%
UK Gas Exports	260	33%
Net Imports	358	46%

Source of Imports	TWh	% of Imports
Pipeline from Norwa	339	55%
Other Pipeline	2	
Total LNG	277	45%
LNG from USA	138	22%
LNG from Qatar	84	14%
Other LNG	55	9%

regen transforming energy

In some ways, 2022 was an exceptional year, with very high imports, especially of LNG, and very high exports. This reflects the fact that, during the period of the energy crisis, the UK offered an additional landing point for LNG that was then exported in the form of pipeline gas to Ireland and the rest of the EU.

The overall trend is, however, consistent: falling gas demand, even faster falling production and an increased import dependency. As we will discuss later, the fall in production cannot be made good by an increase in North Sea exploration licences. Even new mega-fields like Rosebank (which is mainly an oil field) can offer only a marginal increase in UK gas production at less than 5 TWh per year over its first 10 years, and falling thereafter.[13]

Like gas, the story of UK oil is also one of rapidly falling production, from 126 million tonnes in 2000 to a little over 38 million in 2022 – a fall of 70%. The UK is now a net importer of both crude oil and petroleum products.

[12] One way the UK could affect price behaviour in the short term would be to increase the level of gas storage and potentially hold a strategic reserve. The US has in the past implement export controls for oil and gas.
[13] Rosebank is estimated to produce 39 million cubic feet of gas per day over the first 10 years of its life. https://cdn.equinor.com/files/h61q9gi9/global/0c0ac22fa94009344190f5cdad065ba88b4404ed.pdf?rosebank-socioeconomic-report-equinor.pdf

The link between UK oil production and the UK consumption of petroleum products is extremely tenuous. Many people now understand that we both export *and* import oil, but the extent to which this happens is surprising. In 2022 we **exported around 80% of our oil** and natural gas liquid production, meanwhile we also **imported around 87% of the crude oil and process oils** that were refined in UK refineries, so the UKCS provided just **13% of the UK's demand for crude oil.**[14] We were also a net importer of petroleum products, including petrol, diesel and fuel oils.

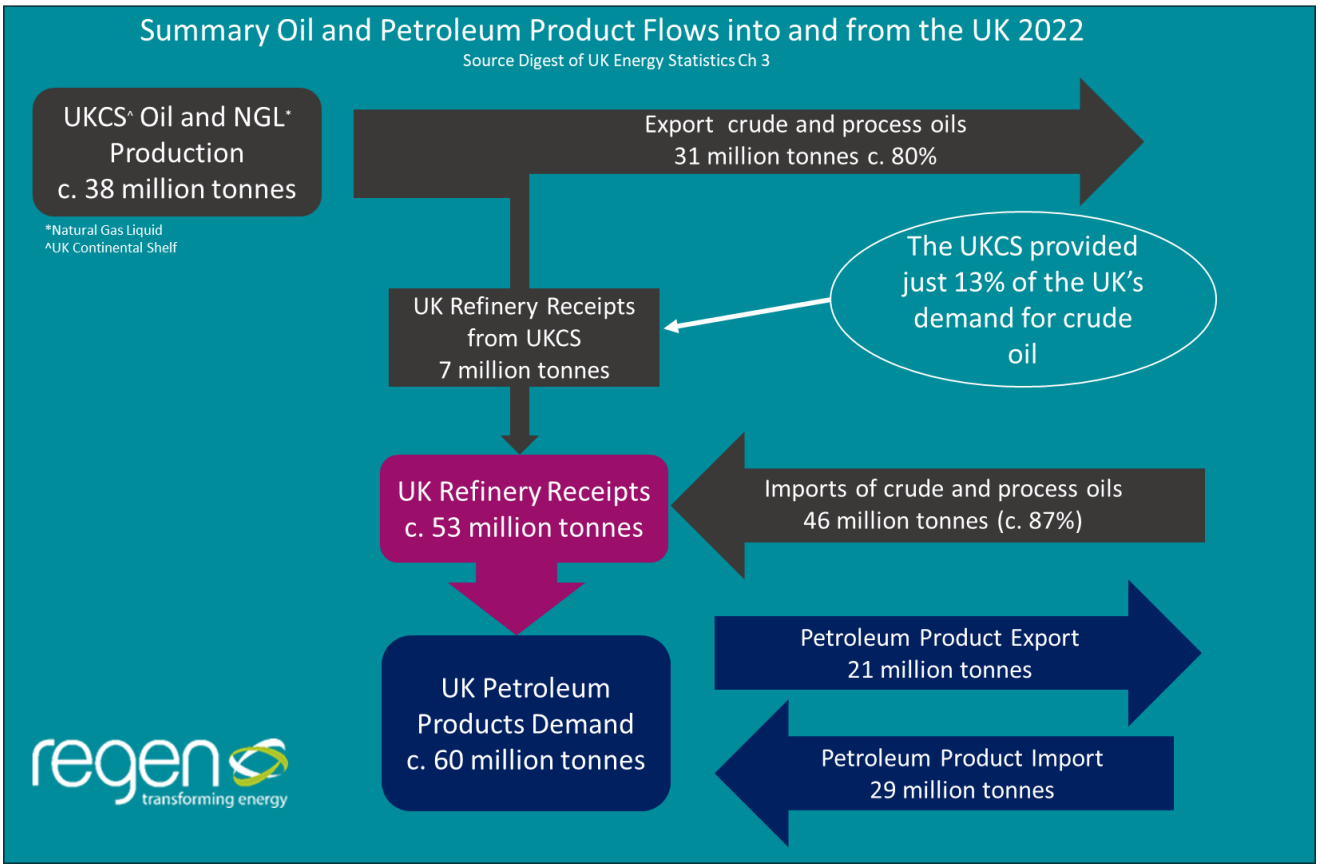


Figure 3 Flows of crude oil, natural gas liquid and petroleum products into and from the UK in 2022. Source: DUKES Ch. 3.

What the flow of crude oil and petroleum products tells us is that oil and its derived products are globally traded commodities and the choice of which crudes to refine, where to refine them and which products to manufacture is determined by a very complex set of economic and logistical considerations. It also tells us that these decisions are made on a multinational basis by companies that are, in the main, not UK owned. The idea of UK oil having a UK ownership, and being refined in UK refineries, is a fantasy. The key attribute of oil is not its nationality, but its chemical properties (viscosity, sulphur and density), its physical location and its price.

In the context of this global market, and an increasing import dependency, there is very little that the UK can do to increase its energy security and exposure to volatile oil and gas prices, except of course to reduce its consumption of fossil fuels and develop its own indigenous and renewable energy sources.

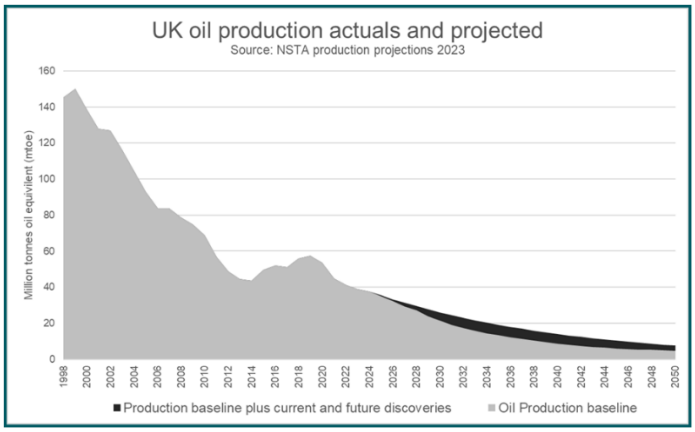
[14] Some UKCS oil may of course be exported and then re-imported again either as Crude or Process Oils (and petroleum products)

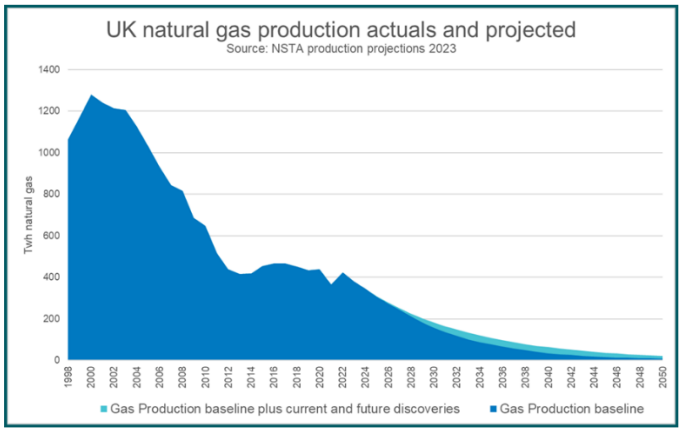
Controversy 5

Will new annual licence rounds make any difference, or is this just a political stunt?

UK oil and gas production is in terminal decline. No serious energy analyst or commentator is challenging that underlying reality. The reason the NSTA is called a transition authority is that we need to transition away from fossil fuel extraction – and that's not just because of climate change, it's also because the oil and gas fields on the UKCS are being depleted.

The numbers are extremely stark. Since the peak of natural gas production in 2000, output has already fallen to two thirds, and is projected by NSTA to fall to almost nothing by 2040.





The outlook for oil is almost the same. Despite some major new fields west of Shetland, such as Rosebank and Cambo, the fall in production of almost 70% since 2000, is projected by NSTA to taper to less than 20 mtoe by the middle of the next decade.

A key point to emphasise here is that these projections, which have been made by NSTA, include their estimate of the likely development of both current and future discoveries. In other words, they reflect the underlying depletion in both existing and potential future reserves.

Now, old hands in the oil sector will point out that one can never be sure on future projections and that we have heard in the past that oil reserves are declining only to then discover new fields, plus NSTA has a reputation of being cautious when estimating reserves. And there is always the potential that very high future oil and gas prices might make otherwise-uneconomic fields viable.

However, even with the most optimistic outlook, it is folly bordering on delusion for government ministers to suggest that new exploration licences provide certainty for the industry, protect 200,000 jobs or will make more than a marginal contribution to the UKs energy security.

It is notable that the industry has been far less vocal in calling for more frequent licensing rounds. It is also notable that a very high proportion of the blocks (exploration areas) that have been included in the latest 33rd licencing round are 'relinquishments'; in other words these blocks have previously

been licensed to another oil and gas developer for exploration and then, for whatever reason, handed back after an initial assessment.[15] According to NSTA data, more than **55 of the 64 blocks** that were included in 27 licences awarded on October 2023 in the first tranche of round 33, were relinquishments. This is not surprising and there is nothing odd about exploration blocks being passed from one development company to another, especially in a very mature basin like the North Sea. It is also possible that another company, looking at the same block, will find viable hydrocarbons, and in fact the priority block opportunities are likely to have been assessed to some extent. What this does show, however, is that new licences do not equate to completely new areas of exploration. The North Sea is not at the stage where significant new fields are being discovered, even in areas like the West of Shetland.

From the outside it is very hard to judge what the scale of opportunity is for new oil and gas production in the North Sea. All the data, analysis and reports that have been produced to date point to the depletion of existing fields and very limited potential for major new developments. This is also what NSTA is publishing. If the government, and the NSTA, really feel that there is the potential for new licences to significantly change that outlook then they should be challenged to publish their analysis and data. Meanwhile, it is entirely misleading and disingenuous to claim that there is any prospect of protecting 200,000 oil and gas jobs, or of providing any degree of energy security – other than by investment in new low-carbon industries.

Conclusion

If the proposed legislation to introduce a mandatory annual oil and gas licensing rounds is not a serious energy policy, one has to conclude that it is a political stunt which is intended to create a wedge issue, especially in Scotland and in the forthcoming UK election, and to make it more difficult for a future Labour government to implement a new licence moratorium.

If this legislation is introduced then there are a number of obvious amendments which could be proposed. First, remove the final decision on the climate compatibility checkpoint from NSTA and place it back into government. Second, significantly strengthen the checkpoint, making it a legal requirement and introducing criteria that would really force decarbonisation in the North Sea, as well as criteria related to the overall global production gap. And last, bring NSTA into the regulatory control of the OSR, so that its data analysis, methodology and communication of data can be properly overseen.

[15] Data on relinquishments including relinquishment reports prepared by the previous licence holder is available on the NSTA website Open Data portal.