

The case for introducing strategic infrastructure-led permits to replace traditional offshore licensing



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We live in uncertain times and energy security has risen to the top of the political agenda. Until renewable sources are in place, oil and gas will continue to serve some of our energy needs. Yet the sector faces severe headwinds including the prospect of no new licences or fields. But could there be a way for the Government to meet their manifesto pledge yet enables the drilling of climate compatible prospects rather than carbon intensive imports?

The North Sea basin is a mature oil and gas province. As with other global exemplars, geophysicists and geologists identified the big structures like Brent, Forties, Leman and Inde early and the drilling thereof led to their development and ramp up in production during the 1970s and 80s.

As a consequence of the North Sea opening up, the UK became self-sufficient for its oil and gas needs and for a time became a net exporter, with all the positive consequences that had for revenues, the taxable profits from which underpinned growth after a period of national decline. The Office for Budget Responsibility state that tax receipts rose to a record high of £12.4billion in the 1990s and 2000s compared to £1.4billion - a fall of 88% - in the following decade.

Oil and gas production exceeded demand in 1980 and 1995 respectively, peaked around the turn of the century, before gas demand

exceeded production in 2004 and oil demand exceeded production three years later. Production rates have now diminished to the point where the UK currently produces 800,000 barrels a day (compared to almost three million bbls/d in 1999). Similarly, gas production was around 4,000 million standard cubic feet of gas per day (MMscf/d) last winter and just over 3,000 MMscf/d in May, five times lower than the 15,600 MMscf/d produced at its peak in 2000.

The current diminished state of the basin is underlined by the reduced average field size over the years, which has declined from 285 million barrels over the period 1964-1983, 57 million barrels between 1984 and 2003, and 48 million barrels between 2004 and 2022.

Despite the desire to wean ourselves off oil and gas and the decline in production, the UK has become no less dependent upon them, and our energy consumption still relies on oil and gas to meet three quarters of our needs. Furthermore, gas provides the domestic supplies for around 22 million homes (over 85% of the total), relying on it for electricity baseload, sometimes to the tune of over 50% of our power generation at times when the wind doesn't blow and the sun doesn't shine.

The shortfall in our gas production is met by imports and we are reliant upon gas supplies from countries like Norway, the USA, Algeria, Qatar

and Peru. In the case of the USA, the liquified natural gas we receive is largely derived from fracked shale, which is carbon intensive and the exploration of which is banned in the UK.

The closure of oil refineries - of which Grangemouth and Lindsey are simply the latest examples - also means that in addition to importing to close the gap between indigenous production and the supply need, some of the North Sea's product is exported, refined and then re-imported.

Major and laudable efforts are being made to make the UK a clean energy superpower and meet our legally binding net zero targets through the build-out of a renewable energy sources and investment in the grid infrastructure needed for an electrified system. However, given the current reliance we have on oil and gas and the time and money needed to repurpose and build a new, robust and reliant renewables-based system, there remains an urgency to address the ever-increasing gap between UK production and imports that has emerged.

While fossil fuels are polluting and we need to pivot away from them, the Committee for Climate Change identify that there will still be a role for oil and gas in the energy mix in 2050 and beyond. Given our current dependence and that need, the challenge to transition is self-evidently difficult, nuanced and must be managed if it is to be orderly and just.

For context, the UK's greenhouse gas emissions have dropped by over 50% since 1990 (down from 812 MtCO₂e then to 384 MtCO₂e in 2023) and is now less than 1% of the global total. The direct extraction from our oil and gas fields and terminals was 12.9 MtCO₂e in 2023, meaning they accounted for 3% of greenhouse gas emissions in 2023 (i.e. only 0.03% of global emissions).

Given that backdrop, increased imports also bring the inconvenient reality of an even higher carbon footprint than our highly regulated home-grown product, something that is detrimental to the global climate, the very opposite of the intent.

Retention of the Energy Profits Levy, despite the windfall tax conditions having long past, the commitment to no new fields and no new licenses, the Fitch Judgement regarding scope 3 emissions, and low commodity prices means that there is a real uncertainty in the oil and gas sector. The resultant lack of confidence means that the UK is not an attractive place to invest and the industry is feeling unloved and unwanted.

Implicit in the UK Government's commitment to "no new fields" and "no new licensing" is the acceptance that we will still need old ones to produce and existing undeveloped discoveries to come on stream. Development of existing discoveries and undrilled prospects could meet half of the demand. The penalty for not doing so is more imports.

None of the investment for the oil and gas we use will be made by the sector without a clear signal from Government that some projects can go ahead. Without such encouragement, the UK runs the risk of closing down our part of the North Sea and replacing its supply with even more oil and gas imports from other parts of the same sedimentary basin or sourcing them from further afield with a dependency on the best and most secure routes in an uncertain world.

Without the pre-requisite renewable supplies being in place to replace oil and gas, the current inertia has adverse consequences for the economy, tax revenues, closure of industrial clusters, loss of jobs and the climate.

The current position in the UK contrasts with that of other countries like New Zealand and the Netherlands, where the need for in-country production has led to a reversal of their oil and gas policies.

Review of the results of offshore licensing rounds over the past decade shows they have had low work programs (seismic and drilling commitments), something that has resulted in limited amounts of oil and gas being discovered and produced - equivalent to only around 40million barrels or so being produced from awards in the 28 to 33rd licensing rounds.

As a consequence, there is a strong case that licensing rounds in their current form are simply symbolic, political theatre and thus, are no longer fit-for-purpose.

Production from existing fields depends on pipelines to shore and as such the latter are critical infrastructure. If the pipelines receive less throughflow, tariffs reduce and they can become uneconomic, they could be switched off prematurely. This has already happened in the Southern North Sea, where closure of the Caister-Murdoch-Schooner pipeline and cessation of operations at its Theddlethorpe terminal led to producing fields having to shut-in leaving stranded reserves.

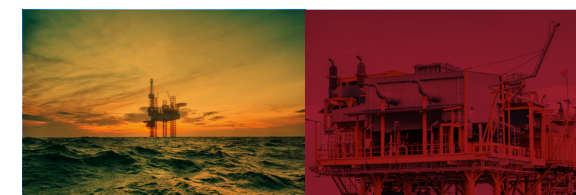
If one accepts these premises, the question is whether there is a way square the circle that offers a solution for investment, increases energy security, addresses environmental sustainability and global climate impacts, yet is consistent with the manifesto commitment of no new licenses?

I believe there is and it is achievable through strong regulation and good stewardship that continues efforts to drive down home-grown emissions by banning flaring, encouraging carbon storage solutions and

increased electrification of offshore platforms on the one hand, and by permitting near-field exploration or infrastructure-led drilling around existing fields and the aforementioned strategically important pipelines on the other.

Adopting this approach would enable timely and bespoke applications to be made and evaluated for their economic importance and climate compatibility on a case-by-case basis. Doing so, would lead to the quicker development of high impact discoveries, albeit of modest size, that can help arrest the current and projected decline in UK production. A similar model was adopted by Denmark in 2020, who allowed drilling permits to be issued whilst declaring that no new exploration licenses would be offered.

Allowing the issue of permits focused upon near-field or infrastructure-led exploration is a practical and pragmatic way for the UK to arrest an otherwise ever-increasing dependency on imports to meet society's current needs, provide support for the sector at a time of stress, enhance energy security, avoid the premature closure of critical facilities, reduce our impact on global emissions and help avoid an unmanaged, disorderly and unjust outcome for communities be they in Aberdeen or across the UK.



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