

# **Scotland's Onshore Unconventional Oil and Gas Policy**

**The Scottish Government's Finalised Policy  
Position on Unconventional Oil and Gas  
Development**

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**Scottish Government**  
Riaghaltas na h-Alba  
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## **SCOTLAND'S ONSHORE UNCONVENTIONAL OIL AND GAS POLICY**

### **THE SCOTTISH GOVERNMENT'S FINALISED POLICY POSITION ON UNCONVENTIONAL OIL AND GAS DEVELOPMENT**

#### **Statement outlining our policy position on unconventional oil and gas.**

##### *Overview*

Unconventional oil and gas is an issue that has stimulated intense debate, motivated by deeply held and sincere views on all sides. The Scottish Government has undertaken one of the most far-reaching investigations of any government, anywhere, into unconventional oil and gas, and we are aware that the future of unconventional oil and gas in Scotland is relevant to wider energy issues and our world-leading climate change ambitions.

##### *Scotland's approach to delivering a low carbon economy*

Our environment and economy are intrinsically linked. The transformation of the energy system in Scotland, as part of the drive to tackle climate change, has the potential to bring significant economic and social opportunities to individuals, businesses and communities.

Scotland's transition to a more prosperous, low carbon economy is already well underway. We have created jobs and backed new and innovative industries while winning international respect for our ambition and leadership on climate change.

As of 2017, we have delivered a 39.1% reduction from baseline levels (based on emissions adjusted for trading in the EU-Emissions Trading Scheme), missing our annual target, due to revisions to source data and the increased availability of emissions allowances throughout the EU-wide scheme. Actual Scottish emissions reduced 46.8% between 1990 and 2017.

The Scottish Government's third Climate Change Plan, published in February 2018, sets out our approach to meeting our statutory emission reduction targets to 2032, paving the way for Scotland's transition to a low carbon economy.

On 23 May 2018, the Scottish Government introduced a new Climate Change Bill to Parliament with even more ambitious targets than those prescribed by the 2009 Act. The Bill contains the most ambitious statutory targets of any country in the world for 2020, 2030 and 2040. The Scottish Parliament passed this Bill on 25 September 2019.

The Intergovernmental Panel on Climate Change (IPCC) report on global warming, published shortly after the SEA Environmental Report on unconventional oil and gas

(October 2018), makes clear that all countries, as well as businesses and individuals, need to act now if the Paris Agreement goals are to be met. The IPCC report says the world needs to be carbon-neutral, defined as net-zero emissions of carbon dioxide, by 2050.

The First Minister declared a global climate emergency at the end of April 2019 and in May 2019 the UK Committee on Climate Change (CCC) advised that Scotland could achieve net-zero emissions of all greenhouse gases by 2045 and the UK by 2050. The Scottish Parliament's Environment, Climate Change and Land Reform Committee voted in June 2019 to accept the Government's amendments to the Climate Change Bill to increase our targets in line with the CCC's advice. The UK Government introduced secondary legislation setting a net-zero target for 2050.

### *The Scottish Energy Strategy*

In delivering a strategic approach to the long-term energy transition, the Scottish Government has also developed and published a new 2050 Energy Strategy, adopting a 'whole system approach' to securing a modern, integrated, low carbon energy system that delivers reliable supplies of energy at affordable prices to consumers in all parts of Scotland. Scotland's Energy Strategy 'The Future of Energy in Scotland' was published in December 2017.

### *Scotland's future energy mix*

We know that over the next four decades, in each individual element of the energy system – be it heat, transport, or electricity – the potential for transformational change is great and the demands on our energy infrastructure will change dramatically in the decades ahead.

The future energy mix in Scotland will continue to be determined by a number of factors such as technology, innovation, changing costs, and regulatory frameworks. In light of this, the Energy Strategy does not prescribe an exact energy mix for 2050; however, we go further in exploring the development of the main characteristics of the energy system between now and 2050 and articulating a clearer understanding of the choices that lie ahead.

### *The role of natural gas in our energy system*

Despite the inherent uncertainty in the long-term energy mix, the Scottish Government recognises that oil and gas will continue to have a vital role in the energy mix over the short, medium and long term, as we face a similar challenge to all advanced economies of developing cost-effective substitutes for hydrocarbons.

Natural gas is central to the projected energy mix, globally, with demand forecast to increase until 2040. Scotland currently relies on natural gas to supply the bulk of

energy demand for heat, and gas will be an important part of Scotland's energy mix for the foreseeable future and production of natural gas from beneath Scotland's adjacent waters is sufficient to meet Scotland's final consumption of gas six times over. However, addressing this ongoing and future demand represents a key challenge for the future in balancing the needs of consumers with a lower carbon secure energy system.

The Scottish Government recognises that the offshore oil & gas sector is a key component of our energy system and our economy. We are committed to supporting the offshore sector, recognising both the significant opportunities remaining and the importance of securing energy supplies from secure, well-regulated sources, such as UK continental shelf (UKCS), as we transition our energy system.

Alongside this, we require a balanced approach that reduces demand for carbon intensive fuel sources and lowers our reliance on imported fossil fuels. This is why we will continue to work closely with businesses and key industrial clusters to support action to accelerate cost-effective industrial decarbonisation measures.

As we move towards a decarbonised energy system, the role of gas and the gas network will change. The gas network could provide a flexible asset for the transportation and storage of a range of low carbon gases including hydrogen, biogas, biomethane and bio-SNG (substitute natural gas).

A reduction in emissions from heat could be realised by the use of these gases in the gas network. For instance, a transition toward a hydrogen-based gas grid would require production of hydrogen from natural gas (in a process known as steam methane reforming) alongside renewable-based production. The production of hydrogen from steam methane reformation would need to be coupled with carbon capture and storage in order to gain the carbon benefits of hydrogen as a fuel source.

### *Unconventional oil and gas*

#### **Conventional versus unconventional oil and gas**

The oil and gas industry use a range of techniques to extract oil and gas from underground reserves.

Conventional oil and gas reserves can be exploited by drilling a well, with oil or gas then flowing out under its own pressure.

Conventional deposits are contained in porous rocks with interconnected spaces, such as limestone and sandstone. These interconnected spaces give rise to permeability that allows oil or gas to effectively flow through the reservoir to the well.

Unconventional oil and gas deposits are contained in impermeable rocks, such as shale or coal deposits. In these cases, the oil or gas cannot easily flow through the reservoir. To extract the oil and gases, techniques such as hydraulic fracturing (commonly referred to as fracking) or coal bed methane dewatering are used.

Most of Scotland's unconventional oil and gas deposits occur in and around former coalfields and oil shale fields in Scotland's Central Belt, which contains some of the most densely populated areas of the country, as well as in the area around Canonbie, Dumfriesshire. This is why our cautious, participative and evidence-led approach regarding unconventional oil and gas is so important.

### ***What is hydraulic fracturing?***

Hydraulic fracturing (or 'fracking') is a drilling technique that is used to fracture rock to release the oil and gas contained in those rocks. It is most commonly used to extract oil and gas from shale.

The rock is fractured by injecting pressurised fluids into the rock to prise open small spaces the rocks, which release the oil or gas.

### ***What is coal bed methane?***

Coal bed methane is also considered to be an unconventional source of gas. This is because the gas is present in the coal rather than being held in pore spaces.

To extract the gas, water is drained from the coal seam to release pressure (known as dewatering). This may be undertaken with or without hydraulic fracturing, depending on local geological conditions.

### ***A timeline of the Scottish Government's evidence-led approach to unconventional oil and gas***

The Scottish Government has undertaken one of the most far-reaching investigations of any government, anywhere, into unconventional oil and gas.

This work began in 2013 with the establishment of an Independent Expert Scientific Panel to examine the evidence on unconventional oil and gas, including hydraulic fracturing, or 'fracking', and coal bed methane extraction.

The Panel reported its findings in July 2014. More information on the work of the Expert Panel, including the final report, can be found at:

<http://www.gov.scot/Publications/2014/07/1758/0>.

After carefully considering its findings, we introduced a moratorium on onshore unconventional oil and gas in January 2015. This created space to explore the

specific issues and evidential gaps identified by the Expert Panel, and to undertake a comprehensive period of public engagement and dialogue.

Our moratorium on unconventional oil and gas was implemented through the Scottish Planning system. A Direction was issued to all Planning Authorities in Scotland on 28 January 2015 when our moratorium was announced, with an accompanying Direction to the Scottish Environment Protection Agency.

In early 2016, the Scottish Government commissioned a further suite of independent research reports to address the evidential gaps identified by the Expert Panel. The reports, covering health, economic and environmental matters, allowed us to consider further independent expert scientific and economic impact advice, including from the British Geological Survey, Health Protection Scotland, and the UK Committee on Climate Change.

The following research studies were commissioned in 2016:

- Economic impacts and scenario development (undertaken by KPMG)
- Climate Change impacts (undertaken by the Committee on Climate Change)
- Understanding and monitoring induced seismic activity (undertaken by the British Geological Survey)
- Transport - Understanding and mitigating community level impacts (undertaken by Ricardo)
- Decommissioning, site restoration and aftercare – obligations and treatment of financial liabilities (undertaken by AECOM)
- Health impact of unconventional oil and gas in Scotland (undertaken by Health Protection Scotland)

The research reports were published in full on 08 November 2016. The research reports can be read at: <https://www.gov.scot/Topics/Business-Industry/Energy/onshoreoilandgas/EvidenceGathering>.

A public consultation, Talking “Fracking”, was launched on 31 January 2017. The consultation embodied the Scottish Government’s commitment to local communities participating in decisions that matter to them, and included a number of innovative steps to encourage debate, dialogue and wide participation.

The consultation received 60,535 valid responses, at that point the second largest response to a Scottish Government consultation, and a clear validation of our participative approach.

Of these responses, 52,110 (86%) were campaign responses or petitions; and 8,425 (14%) took the form of substantive responses.

Of respondents in Scotland who provided a substantive response and a postcode, nearly two-thirds (4,151) lived in one of 13 local authority areas identified as potentially having significant shale oil and gas reserves or coal bed methane.

The overwhelming majority of respondents were opposed to the development of an unconventional oil and gas industry in Scotland. While not a referendum, and not necessarily representative of the population as a whole, approximately 99% of the responses were opposed to unconventional oil and gas extraction in Scotland.

The consultation findings were published, in full, on 03 October 2017, and can be accessed here: <http://www.gov.scot/Publications/2017/10/9813>.

In line with statutory requirements, the Scottish Government undertook a Strategic Environmental Assessment (SEA) in 2018; a partial Business and Regulatory Impact assessment (BRIA) was also undertaken. An eight-week consultation on the SEA Environmental Report, partial BRIA, and preferred policy position of not supporting unconventional oil and gas development in Scotland (“the 2018 consultation documents”), was carried out from October to December 2018.

The responses received to the consultation led the Scottish Government to form the view that it would be helpful to provide some further clarification on a number of points raised in response to the consultation documents, specifically regarding the preferred policy position and its objectives. As a result, an addendum to the 2018 consultation documents was published on 30 April 2019, which invited further comments, over an eight-week period, on the points covered.

The findings of the 2018 and 2019 consultations were published, in full, on 03 October 2019, and can be accessed on the Scottish Government website.

Responses to the 2017 Talking “Fracking” consultation, 2018 consultation, and 2019 addendum consultation have all been considered by Scottish Ministers as part of the finalisation of unconventional oil and gas policy in Scotland.

### **The Scottish Government position on unconventional oil and gas**

On 03 October 2017, the Minister for Business, Innovation and Energy set out the Scottish Government’s considered position on unconventional oil and gas in Scotland subject to statutory and other assessments.

As there is potential for significant environmental effects, either as a consequence of industrial activity or as a consequence of not permitting an unconventional oil and gas industry, a Strategic Environmental Assessment and public consultation was required before the policy is finalised.

The Strategic Environmental Assessment 2018 Environmental Report assessed the effects of UOG development avoided under the preferred policy position, and compared this to the effects of the development of an industry as represented by a 'broad range of impact scenario' based on the KPMG (2016) development scenarios of 'a) central, b) low and c) high levels of exploration, appraisal and extraction of onshore unconventional oil and gas', as well as to the development of a single theoretical pilot project.

The 2018 Environmental Report concluded that the development of a UOG industry in Scotland has the potential for significant negative effects on the environment, even when taking account of existing regulation and consenting processes. The Report also concluded that the effect of the preferred policy position would be to avoid the environmental impacts associated with UOG industry in Scotland.

Reaching a position on unconventional oil and gas has been the culmination of a careful and comprehensive period of evidence-gathering. At each stage of the process the Scottish Government has created opportunities for discourse and debate.

In reviewing the research findings, the Scottish Government has identified particular concerns over the insufficiency of epidemiological evidence on health impacts highlighted by Health Protection Scotland.

The compatibility of an unconventional oil and gas industry with Scotland's world leading climate change targets is an area of further concern.

The study commissioned by the Scottish Government to examine climate change implications, which was undertaken by the Committee on Climate Change, concluded that unconventional oil and gas extraction in Scotland would make meeting our existing climate change targets more challenging.

As the Committee state in their report, in order to be compatible with Scottish climate change targets, emissions from production of unconventional oil and gas would require to be: tightly regulated and closely monitored to ensure rapid action to address leaks; offset through reductions in emissions elsewhere in the Scottish economy; and Scottish unconventional oil and gas production would require to displace imported gas, rather than increasing domestic consumption. The Scottish Government is conscious of the cost implications of the additional mitigation actions in other areas of the economy that might be needed to counterbalance an increase in emissions from unconventional oil and gas development.

The Scottish Government is also aware that the potential activity associated with an unconventional oil and gas industry would likely be concentrated in and around former coalfields and oil shale fields in the Central Belt of Scotland, which are among the most densely populated parts of the country.

It is clear from consultation responses that communities across Scotland, particularly in areas where developments could take place, have yet to be convinced there is a strong enough case of national economic importance, when balanced against the risk and disruption they anticipate on matters such as transport impacts, risks of pollution, and on their general health and wellbeing.

Although the Scottish Government is confident that an unconventional oil and gas industry would aim to work to the highest environmental, and health and safety standards, it is also our responsibility as a government to make a decision we believe is the best for the people of this country. We must be confident that the choices we make will not compromise health and safety or damage the environment in which we live.

The Scottish Government considers the development of an onshore unconventional oil and gas industry in Scotland would make achieving its ambitious energy and climate change commitments even more challenging. Whilst acknowledging the important role of gas in the transition to a low carbon energy future, the addition of an onshore unconventional oil and gas industry would not promote our ability to meet our greenhouse gas emissions targets or objectives in relation to protecting and enhancing the environment.

The outcome of our public consultation shows that in those communities most likely to be affected, there are considerable concerns about the potential impacts and disruption that could be caused.

It is the Scottish Government's position that the research we have commissioned and considered does not provide a strong enough basis from which to address those communities' concerns.

**On this basis, the Scottish Government does not support the development of unconventional oil and gas in Scotland.** This means development connected to the onshore exploration, appraisal or production of coal bed methane or shale oil or shale gas using unconventional oil and gas extraction techniques, including hydraulic fracturing and dewatering for coal bed methane.

On 03 October 2019, Heads of Planning Scotland and the Scottish Environment Protection Agency were informed of the finalised policy position via letters issued by the Chief Planner (HoPS) and Scottish Government officials (SEPA). A Planning Direction has also been issued to reflect the wording of the finalised policy.

This approach ensures decisions on onshore unconventional oil and gas developments will be made having regard to planning policy and procedure, and within the framework of Scottish Government policy – a policy that does not support unconventional oil and gas development in Scotland.

It is common for policies that could have implications on development plans to be reflected in the National Planning Framework. The National Planning Framework sets the context for development planning in Scotland and provides a framework for the spatial development of Scotland as a whole. It sets out the Government's development priorities over the next 20-30 years and identifies national developments which support the development strategy.

This policy will also be reflected in the draft of the next iteration of the National Planning Framework (NPF4). This draft is expected in the parliamentary session 2020/21. When they come into force, the provisions of the Planning (Scotland) Act 2019 will mean that Ministers cannot adopt the National Planning Framework unless Parliament have approved it – a significant change from previous iterations.

Since our preferred policy position was set out in December 2017, certain powers in relation to onshore oil and gas licensing were devolved on 09 February 2018. Commencement of sections 47 to 49 of the Scotland Act 2016 transferred powers for:

- granting and regulation of licences to search and bore for and get petroleum within the Scottish onshore area;
- determining the terms and conditions of licences; and
- regulating the licensing process, including administration of existing licences.

The regulation, including setting, of the consideration payable for a licence remains reserved. In addition, the UK Government has powers to revoke a licence on the basis of failure to make payments due under the licence.

In addition to the policy of no support for unconventional oil and gas being a material consideration for planning decisions, Scottish Ministers would discharge their devolved licensing powers having regard to the adopted policy position of no support for unconventional oil and gas in Scotland. Therefore, while we cannot foreclose consideration of future applications, given the terms of our finalised policy, we do not anticipate granting any new unconventional oil and gas licences in Scotland.



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