

Department for Business, Energy and Industrial Strategy
Oil and Gas Exploration and Production Team

24 October 2018

Dear BEIS,

Thank you for the opportunity to respond to the consultation on the inclusion of shale gas production projects in the Nationally Significant Infrastructure Project Regime.

Regen is an independent, not-for-profit centre of expertise on sustainable energy with 15 years of frontline experience working in the energy sector.

Our response conveys the views of Regen, however as a membership organisation, it has been informed by the 200 business, local authority and community energy members that support our mission to transform the energy system, and by the many hundreds of energy businesses, communities and stakeholders that we work with.

We have extensive experience of guiding the sector through shifts in the energy system over the last decade and influencing change in both the public and private sector. Regen has a long track record of working with the industry, communities and the public sector to help define planning policies that are effective and fair. This includes producing one of the first planning protocols for onshore wind project and for the development of PV, both of which have been adopted by several local authorities.

We are currently working on innovation projects such as researching [the future of planning with the RTPI](#) and in-depth advisory work and energy scenario forecasting for utility companies and public bodies including local, central and devolved governments.

Please find attached Regen's response to the consultation.

Yours faithfully,



Johnny Gowdy
Director, Regen

Introduction

We believe that any move to transfer planning for unconventional shale gas to the Nationally Significant Infrastructure Project regime is wrong for three reasons:

1. There is an inherent conflict and contradiction between support for investment in new forms of fossil fuel extraction and the UK's commitment to decarbonisation and clean growth.
2. An attempt to reduce planning timescales, stymie public opposition and increase the discretion of central government to approve shale gas production against the wishes of local communities runs against the principles of localism and devolution that the government has otherwise supported.
3. The case that unconventional gas could play a significant part in the UK's future energy mix, and the infrastructure that would be required to support it, is completely unproven at this time. The level of recoverable resource, cost of energy, environmental and greenhouse gas emission impacts, infrastructure investment and route to market are all unclear and highly contested.

1) Conflict with climate change and clean growth strategy

The UK is not currently on track to meet targets set in the 4th and 5th carbon budgets, according to the most recent report from the Committee on Climate Change, with decarbonisation of heat being an area of key concern¹.

While gas, along with renewable energy, has been part of the transition away from coal since 2010, further progress to decarbonise the power and heat sectors will now require the UK to significantly reduce its gas dependence.

The Committee on Climate Change has said that *“the implications of UK shale gas exploitation for greenhouse gas emissions are subject to considerable uncertainty – from the size of any future industry to the potential emissions footprint of shale gas production. It also finds that exploitation of shale gas on a significant scale is not compatible with UK carbon budgets, or the 2050 commitment to reduce emissions by at least 80%, unless three tests are satisfied”*².

These three tests include:

- I. Emissions must be strictly limited during shale gas development, production and well decommissioning. This requires tight regulation, close monitoring of emissions, and rapid action to address methane leaks.
- II. Overall gas consumption must remain in line with UK carbon budgets. The production of UK shale gas must displace imports, rather than increase gas consumption.
- III. Emissions from shale gas production must be accommodated within UK carbon budgets. Emissions from shale exploitation will need to be offset by emissions reductions in other areas of the economy to ensure UK carbon budgets are met.

To date none of these tests has been proven, nor has the government, or the fracking industry, set out a credible scenario under which they would be met.

Moreover, it is our strong belief that the government's apparent support for the fracking industry is sending a conflicting message to its clean growth and decarbonisation strategy. This inconsistency is

¹2018 progress report to parliament. <https://www.theccc.org.uk/wp-content/uploads/2018/06/CCC-2018-Progress-Report-to-Parliament.pdf>

² Committee on Climate Change 2016 <https://www.theccc.org.uk/publication/onshore-petroleum-the-compatibility-of-uk-onshore-petroleum-with-meeting-carbon-budgets/>

sending the wrong message to investors, consumers and other energy stakeholders as to the government's commitment and intention to transition to a low carbon economy.

2) Planning issues and localism

Local opposition to fracking is high with only 17% of respondents to the BEIS public attitudes survey actively supporting it³. Many proposed fracking sites across England have been the focal point for protest while Scotland and Wales have both moved to ban fracking altogether.

Shifting fracking into NSIP, along with the parallel consultation to allow exploratory drilling for shale gas as a permitted development, would significantly reduce the ability of local authorities and communities to challenge or delay planning applications affecting their local area. The government should note the advice from the Parliamentary Committee for Housing, Communities and Local Government whose most recent report was against any of the planning changes proposed by the government and that changing planning regulations in this manner "is likely to exacerbate existing mistrust between local communities and the fracking industry"⁴.

Reducing the amount of public involvement in planning decisions on fracking runs counter to the principles of localism, and potentially forces citizen activists to take every more extreme actions to register their protest against fracking. Instead of removing their power to influence decisions, the government should be finding ways to hear these voices and reduce their need to take such drastic steps.

We would also highlight the contrast and contradiction between the way fracking is being supported by government and the policies related to low carbon and cost-effective technologies like onshore wind, which continue to have a high degree of public support.

3) Sector uncertainty

As described in more detail in answer to question 2, we believe that any proposal to consider shale gas fracking under a nationally significant project process is premature while so much uncertainty exists regarding the future scale, technical and commercial viability of the industry.

Question 1

Do you agree with the proposal to include major shale gas production projects in the Nationally Significant Infrastructure Project regime?

No, we believe that it is premature to include shale gas production in the NSIP regime. There is a significant amount of uncertainty regarding the future scale and viability of the industry and it would be inappropriate to make such significant changes at this time.

Question 2

Please provide any relevant evidence to support your response to Question 1.

a) The amount of unconventional gas that could be recovered is unclear

Early estimates of shale gas reserves were quite modest⁵. More recent studies, including the British Geological Survey (BGS) survey of the Bowland basin (which covers areas in the north and midlands

³ BEIS Energy and Climate Change Public Attitudes Survey Wave 25 April 2018

<https://www.gov.uk/government/statistics/energy-and-climate-change-public-attitudes-tracker-wave-25>

⁴ <https://publications.parliament.uk/pa/cm201719/cmselect/cmcomloc/767/76702.htm>

⁵ British Geological Survey (BGS), 2010: 150 Bcm

(https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/367287/Shalegas_uk.pdf)

of England), suggest that ‘gas in place’ volumes could be 1329 trillion cubic feet (central estimate)⁶. As BGS highlight however a ‘gas in place’ volume estimate should not be confused with a measure of reserves (proven or unproven), nor is it anything like a measure of the fraction that could be technically or commercially recovered.

The BGS website itself states that:

“Estimates of the amount of recoverable gas and the gas resources are variable. It is possible that the shale gas resources in UK are very large. However, despite the size of the resource, the proportion that can be recovered is the critical factor. A better understanding of the shale gas resource, and the amount of gas that is potentially recoverable, will come from further geological research, such as that carried out by the BGS. If the amount of recoverable shale gas does prove to be large this will be a significant indigenous source of gas for the UK and may reduce our reliance on imported gas.”⁷

Until the resource potential and commercial viability of unconventional gas has been confirmed it is premature to conclude that unconventional gas will be a nationally significant source of energy.

b) It is unclear whether unconventional gas could be economically viable

Most energy analysts are in agreement that the extraction and delivery of UK unconventional gas will be more expensive than the cheapest gas sources on the international market and that it will, in terms of price, continue to be a marginal source of supply.

Whether the UK industry will develop to a significant scale will therefore depend on the future price of gas. At the moment, gas prices are rising, but the long-term projections, backed by industry expert economists like Dieter Helm⁸, is that oil and gas prices will inexorably fall over time as the world decarbonises. In reality, what we are likely to see is extremely volatile gas prices as both gas demand and gas supply ratchets down the growth curve, exacerbated by the usual impacts of economic and political uncertainty and increasingly the impacts of climate change itself.

Given high price volatility, drilling and production activity for unconventional gas is likely to closely follow changes in the market price of gas.

c) The scale of an industrialised unconventional gas industry has not been defined

Lessons from North America suggest that to make a significant contribution to the UK’s energy supply would require the full industrialisation of the fracking industry. Studies on the future of the UK industry have focused on the volumes of gas resource that may be held underground, but have not presented an analysis of the size and scale of the industry that would be required to exploit these resources.

Basic infrastructure parameters, such as the extent of the fields that would be developed, the number of wells that would have to be drilled, and the programme of continuous exploration and drilling that would be required to keep fields productive, have not been defined.

Experience from the USA suggest that significant land-space and potentially thousands of well heads would be required over time.

US Energy Information Administration (EIA): 740 Bcm

(https://www.eia.gov/analysis/studies/worldshalegas/pdf/UK_2013.pdf)

⁶ BGS survey of Bowland-Hodder 2013 - central estimate of gas in place of over 23000 Bcm

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/226874/BGS_DECC_BowlandShaleGasReport_MAIN_REPORT.pdf

⁷ See Frequently Asked Question ‘Can shale gas meet the UK energy needs?’

<https://www.bgs.ac.uk/research/energy/shaleGas/home.html>

⁸ Dieter Helm “Burn Out : The End Game for Fossil Fuels”, 2017.



Oil and gas wells in Wyoming's Jonah field (Pic: [Ecoflight](#))

A key unanswered question therefore is how many wells would the UK have to drill in order to reach the scale to materially contribute to the UK's energy supply. Would we ever be prepared to work on such a scale given the land-use and infrastructure required?

d) How gas will be delivered to market and the infrastructure required to achieve this is unclear

BEIS provide advice and guidance on shale gas extraction, but is light on detail on the infrastructure that will be surround the extraction itself. The animation that the government has posted describes the process of exploratory drilling, production and, in due course, decommissioning. In terms of getting gas to market the animation suggest that this could be achieved via road tanker.⁹



Government suggest road tanker route to market for unconventional gas

Putting aside the environmental and safety issues of having potentially thousands of gas tankers on the road, this raises key logistical questions:

- Where is the truck going? To a gas processing plant presumably, but where is that?
- Given the low energy density of gas - how many gas tankers would we need?
- Would the number of tankers flex to meet peak demand or price periods?
- Presumably the gas would be pressurised – how much energy would that take?
- Who's going to invest in all these tankers? And what will they be doing if gas prices fall and gas production activity stops?

⁹ Guidance on fracking: Developing shale gas in the UK: <https://www.gov.uk/government/publications/about-shale-gas-and-hydraulic-fracturing-fracking/developing-shale-oil-and-gas-in-the-uk#government-development-of-shale-gas-industry>

- How could a distribution system reliant on road tankers possibly be cost effective?

Until the distribution and logistical issues are addressed it is unclear what infrastructure will be needed to support the fracking industry.

e) Whether unconventional gas could be consistent with the UK decarbonisation policy is unproven

The Committee on Climate Change (CCC) has said that *“the implications of UK shale gas exploitation for greenhouse gas emissions are subject to considerable uncertainty – from the size of any future industry to the potential emissions footprint of shale gas production. It also finds that exploitation of shale gas on a significant scale is not compatible with UK carbon budgets, or the 2050 commitment to reduce emissions by at least 80%, unless three tests are satisfied”*¹⁰.

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To date none of these tests has been proven, nor has the government, or the fracking industry, set out a credible scenario under which they would be met.

Fracking is notable in its absence from the latest 2018 progress report from the CCC. The government has asked the CCC to look at the UK’s long term decarbonisation strategy to achieve a zero carbon economy by 2050, consistent with its Paris Agreement commitment. We would suggest awaiting the outcome of this study, and specifically asking the CCC to consider the role of fracking, before any change is made to the planning regime.

f) Fracking is overwhelmingly unpopular

While a high degree of uncertainty exists regarding the future of the industry, what is very clear, from the government’s own survey evidence, is that fracking remains overwhelmingly unpopular across the nation and is especially opposed in those communities that may be forced to host fracking sites.

In the last public attitude survey (Wave 25)¹¹, published by BEIS, before the question was dropped, only 17% of respondents actively supported fracking. This compares to over 80% who support the development of renewable energy projects.

Given the opposition to fracking in Wales and Scotland and the strident opposition that has been demonstrated in England, including the willingness of citizen activists to risk imprisonment and other state sanctions, it would be irresponsible for any future government to try and enforce shale gas development through a top-down planning process which is ultimately determined by the secretary of state.

¹⁰ Committee on Climate Change 2016 <https://www.theccc.org.uk/publication/onshore-petroleum-the-compatibility-of-uk-onshore-petroleum-with-meeting-carbon-budgets/>

¹¹ BEIS Energy and Climate Change Public Attitudes Survey Wave 25 April 2018 <https://www.gov.uk/government/statistics/energy-and-climate-change-public-attitudes-tracker-wave-25>

Question 3

If you consider that major shale gas production projects should be brought into the Nationally Significant Infrastructure Project regime, which criteria should be used to indicate a nationally significant project with regards to shale gas production?

We do not consider that major shale gas production projects should be brought into the NSIP regime.

Question 4

At what stage should this change be introduced? (For example, as soon as possible, ahead of the first anticipated production site, or when a critical mass of shale gas exploration and appraisal sites has been reached).

In attempting to answer this question, it becomes clearer that it is not an appropriate point in time to consider such a change to the planning regime. Fracking exploration has only just got under way in the UK after a seven year lapse from the first attempt. For a myriad of reasons, fracking is taking a long time to become established in the UK and given the uncertainty over the amount of gas that can be extracted, it is unclear whether it ever will. It would be premature to change the planning regime in legislation at such an early stage.