



Inclusion of shale gas production projects in the Nationally Significant Infrastructure Project regime

Faculty of Public Health
Sustainable Development Special Interest Group (SIG)

FACULTY OF
PUBLIC HEALTH

Response to consultation

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

No

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

The Faculty of Public Health believes there should be an immediate moratorium on the production of shale gas through hydraulic fracturing. To include shale gas production in the NSIP would therefore be illogical. It would also be in stark contrast to, and inconsistent with, the Government's policy with regard to wind power, which as an established technology is arguably of greater National Significance than shale gas.

Hydraulic fracturing (fracking) is a significant public health threat, both because of its immediate and local impacts, but also because of the potentially catastrophic public health impacts of climate change caused by greenhouse gas emissions.^{i, ii}

Although the evidence linking hydraulic fracturing to ill health is contested, and any actual harm done will depend on many local factors including the proximity of local populations, how the site is managed, geological and meteorological conditions, nevertheless there are significant grounds for concern. Fracking causes air pollution and water contamination, including with toxins that are linked to increased risks of cancer, birth defects and lung disease.^{iii, iv, v, vi, vii, viii, ix}, in addition to which there are negative health impacts associated with noise, traffic, damage to the natural environment and local social and economic disruption. These risks are potentially greater in the UK than in other countries because of the proximity and size of surrounding populations. Whilst these adverse health impacts are not proven, the precautionary principle mandates avoiding unnecessary risk, and puts the onus on proposers of the developments to demonstrate that it is safe.

Of greater concern, however, is the impact of the exploitation of yet more fossil fuel reserves on greenhouse gas emissions and climate change, and the threat this poses to human health. The International Panel on Climate Change (IPCC) has this month re-iterated its warnings about the likely consequences of anthropogenic climate change, and re-iterated, even more forcefully, the vital importance of keeping global warming to less than 1.5°C above pre-industrial levels.^x This will require rapid progression to overall 'carbon neutrality' which in turn makes it essential that the overwhelming bulk of fossil fuel reserves, including shale gas, are not extracted and used. Global warming above this amount will likely have significant, if not catastrophic, effects on human health worldwide, due to direct weather effects (including sea level rise and flooding), adverse impacts on food and water availability, increased transmission of infectious diseases, and adverse public health impacts mediated through human activity, including mass migration and conflict.

Working to improve the public's health

4 St Andrews Place, London NW1 4LB

E: mailto:president@fph.org.uk T: +44 (0) 20 3696 1469 W: www.fph.org.uk

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Although shale gas may generate less carbon dioxide (and produce fewer other pollutants) per unit of electricity generated than some other fossil fuels, in particular coal, this argument is specious since in the UK coal fired power stations are being phased out in any event. The more relevant comparison is with renewable energy sources, where the technology is now well established and could be rolled out more rapidly. Furthermore, shale gas is methane, a significantly more powerful greenhouse gas than carbon dioxide, and hydraulic fracturing, however well conducted, leads to atmospheric releases of significant amounts of this.

Hydraulic fracturing, and the widespread use of shale gas could only be compatible with our pressing need to reduce greenhouse gas emissions to net zero by mid century (and arguably, also with the requirements of the 2008 Climate Change Act), were any development required to have net zero impact itself. This could be achieved either by mandating that any shale gas combustion is combined with fully effective carbon capture and storage, or by ensuring that the use of shale gas displaces a larger amount of alternative fossil fuel use. This could possibly be achieved by putting obligations onto the energy generating companies to demonstrate that they have done this.

To include shale gas production projects as part of the National Significant Infrastructure Project regime would significantly undermine local democracy and decision making. It would be in marked contrast to the current Government's position on windfarm applications which is to give 'local people a final say on such applications' and requiring local planning authorities to grant permission only once 'following consultation, it can be demonstrated that the planning impacts identified by affected local communities have been fully addressed and therefore the proposal has their backing'.^{xi}

The FPH notes that an all party Planning Committee decision in Lancashire voted to reject Fracking in the County- a decision subsequently overruled by the then Communities Secretary Sajid Javid in 2016.^{xii} The FPH believes that the views of democratically elected representatives of local communities affected by planning decisions on Fracking should be paramount in deciding which developments are appropriate and thus permitted for their area. The views of residents directly affected should take priority over non-residents who may simply have a commercial or other interests in allowing unwanted developments in communities in which they do not live.

Finally, should shale gas production projects be included in the NSIP regime, then responsibility for demonstrating its safety would clearly fall to National Government. It would be essential, therefore, that National Government should establish a sufficiently sensitive health and environmental impact monitoring programme, to be run independently of the organisations involved in the gas production, such that adverse health consequences are detected as soon as possible. This should then lead to reconsideration of the continuation of the project.

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? Please select from the list below:

- a. The number of individual wells per well-site (or 'pad')
- b. The total number of well-sites within the development
- c. The estimated volume of recoverable gas from the site(s)

- d. The estimated production rate from the site(s), and how frequently (e.g. daily, monthly, annually or well lifetime)
- e. Whether the well-site has/will require a connection to the local and/or national gas distribution grid
- f. Requirement for associated equipment on-site, such as (but not limited to) water treatment facilities and micro-generation plants
- g. Whether multiple well-sites will be linked via shared infrastructure, such as gas pipelines, water pipelines, transport links, communications, etc
- h. A combination of the above criteria – if so please specify which
- i. Other – if so please specify

4. Please provide any relevant evidence to support your response(s) to Question 3.

5. 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).

6. Please provide any relevant evidence to support your response to Question 5.

ⁱ McCoy D, Saunders P, Fracking and health. *BMJ* 2018;361:k2397 <https://www.bmj.com/content/361/bmj.k2397>

ⁱⁱ A review of the public health impacts of unconventional natural gas development: Saunders, P.J., McCoy, D., Goldstein, R. et al. *Environ Geochem Health* (2018) 40: 1. <https://doi.org/10.1007/s10653-016-9898-x>

ⁱⁱⁱ Hays J, Shonkoff SBC. Toward an Understanding of the Environmental and Public Health Impacts of Unconventional Natural Gas Development: A Categorical Assessment of the Peer-Reviewed Scientific Literature, 2009-2015. *PLoS One* 2016;11:e0154164. 10.1371/journal.pone.0154164. 27096432

^{iv} McKenzie LM, Blair B, Hughes J, et al . Ambient Nonmethane Hydrocarbon Levels Along Colorado's Northern Front Range: Acute and Chronic Health Risks. *Environ Sci Technol* 2018;52:4514-25. 10.1021/acs.est.7b05983 29584423

^v Walker Whitworth K, Kaye Marshall A, Symanski E. Drilling and Production Activity Related to Unconventional Gas Development and Severity of Preterm Birth. *Environ Health Perspect* 2018;126:037006. 10.1289/EHP2622. 29578659

^{vi} McKenzie LM, Allshouse WB, Byers TE, Bedrick EJ, Serdar B, Adgate JL. Childhood hematologic cancer and residential proximity to oil and gas development. *PLoS One* 2017;12:e0170423. 10.1371/journal.pone.0170423. 28199334

^{vii} McKenzie LM, Guo R, Witter RZ, Savitz DA, Newman LS, Adgate JL. Birth outcomes and maternal residential proximity to natural gas development in rural Colorado. *Environ Health Perspect* 2014;122:412-7.24474681

^{viii} Werner AK, Vink S, Watt K, Jagals P. Environmental health impacts of unconventional natural gas development: a review of the current strength of evidence. *Sci Total Environ* 2015;505:1127-41. 10.1016/j.scitotenv.2014.10.084 25461113

^{ix} Hays J, McCawley M, Shonkoff SBC. Public health implications of environmental noise associated with unconventional oil and gas development. *Sci Total Environ* 2017;580:448-56. 10.1016/j.scitotenv.2016.11.118 27939937

^x IPPC ref

^{xi} House of Commons: Written Statement (HCWS42) Department for Communities and Local Government Written Statement made by: Secretary of State for Communities and Local Government (Greg Clark) on 18 Jun 2015; Ministry of Housing, Communities & Local Government. National Planning Policy Framework July 2018

^{xii} <https://www.bbc.co.uk/news/uk-england-lancashire-37567866>