



**Friends of
the Earth
Scotland**

Friends of the Earth Scotland welcomes the opportunity to comment on the draft minerals supplementary guidance within the **Fife Council's** Local Development Plan.

There is a growing body of evidence that environmental and health risks associated with onshore unconventional gas extraction, including coalbed methane, are inherent and impossible to eliminate.

We note that Scottish Government energy policyⁱ does not provide support for unconventional gas extraction. Further we note that the new draft Scottish Planning Policy has removed any presumption in favour of unconventional gas that might have been read into the previous SPP, and introduced more stringent guidelines for how Local Development Plans should deal with the industry, including – crucially – the need for sophisticated buffer zones between sites and communities.ⁱⁱ Based on the environmental and health risks inherently associated with unconventional gas extraction Friends of the Earth Scotland recommends the following:

1. **Fife Council should implement a ban on unconventional gas extraction** through the Local Development Plan, using the precautionary principle and the public duty to reduce climate emissions as a reasonable justification.
2. **Fife Council should implement a moratorium on unconventional gas extraction**
3. Fife Council should strengthen the draft minerals supplementary guidance based on comments below.

1.1 Risk to Climate Targets

A key risk is in relation to our climate targets: unconventional gas extraction is energy intensive, and burning the gas contributes to emissions. Moreover, the impact of 'fugitive emissions' of potent greenhouse gas methane through leaks, flaring and venting has led scientists to argue that the climate impact of unconventional gas could be greater than that of coal.

Using a very conservative estimate of emissions, the International Energy Agency's 'Golden Age of Gas' scenario – exploiting unconventional gas to the full - puts global emissions on a trajectory for a disastrous 3.5°C warming.ⁱⁱⁱ

1.2 Public health

There is also alarming evidence about the potentially devastating public health impacts for communities living in and near gas fields. Communities living near gas fields in Australia complain of respiratory problems, rashes and irritated eyes.^{iv} An investigation by a concerned GP in early 2013 of 38 households in close proximity to coal seam gas wells in Tara, Queensland, found that 58% of residents reported definite adverse health effects related to gas drilling and a further 19% were

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uncertain.^v Symptoms include breathing difficulties, rashes, joint and muscle pains, nausea and vomiting, and spontaneous nosebleeds.

But the long-term human health impacts could be much more serious: research from the USA found that gas operations were leaking highly toxic and carcinogenic benzene into the air.^{vi} Preliminary research from Cornell University suggests that air and water pollution from unconventional gas activities can have a profoundly damaging effect on infant health.^{vii}

The Scottish Government's Independent Expert Scientific Panel concluded that there were serious questions to be answered on health impacts and the Government is beginning some work to look into this.

2.1 While ultimately we think a ban is the only way to ensure our communities and environment do not suffer the adverse consequences of this industry, we believe a **moratorium** would be a 'next best' action for Fife Council, again based upon Scotland's precautionary principles obligations under international treaties.

The precautionary principle clearly applies to the unconventional gas industry which to date has failed to demonstrate that it is safe for the environment and human health, in the face of mounting evidence to the contrary.

3.1 At a minimum, in the absence of a ban or moratorium, Friends of the Earth Scotland recommends changes to the following sections of the proposed minerals supplementary guidance:

- Section 5.3 National Policy Position & local opposition
- Section 5.4 Cumulative impact
- Section 5.5 Buffer zones
- Applying Policy 15: Representation of Underground Coal Gasification

3.2 Re Section 5.3 We are concerned that the language currently included in section 5.3 does not accurately reflect local opposition to unconventional gas nor the policy shift in the new national policy framework which has removed presumption in favour.

3.3 Re Section 5.3 The shift of Government's position from supportive to precautionary is best highlighted in the change from "operators should take into account the potential effects on neighbouring uses and use directional drilling wherever feasible" in SPP 2010 (paragraph 238), and the 2013 consultation draft, to the following guidelines in paragraph 245 in the final version:

Applicants should undertake a risk assessment the risk assessment should be developed in consultation with local communities (as well as statutory consultees); the risk assessment should clearly identify potential risks using a source-pathway-receptor model; the risk assessment should explain how measures will be used to monitor, manage and mitigate the risks; and the evidence from the risk assessment should lead to buffer zones being proposed, to be assessed by planning authorities; if a buffer zone is considered inadequate, planning permission should be refused.

3.4 Re Section 5.3 In Fife there is clear evidence that the community does not support this policy, as can be seen in the opinions of over 2,500 signatories to the online petition entitled “Fife Council: Don't allow the burning of coal under the Firth of Forth” and over 49,000 signatories to the online petition ‘Ban Fracking in the Central Belt of Scotland.’ In neighbouring areas both Falkirk and Stirling Council’s have refused an unconventional gas application from Dart Energy and fought it through a Public Local Inquiry.

3.5 Re Section 5.4 Insofar as cumulative impact can be understood as meaning the accumulation of impacts over time within the same development, as old phases are completed and new ones begun, the new SPP does “encourage operators to be as clear as possible about the minimum and maximum extent of operations” in order that such future cumulative impact can be assessed at the exploration phase.

3.6 In the DRAFT MINERALS SUPPLEMENTARY GUIDANCE Sections 6.45 and 6.46 make no reference to the monitoring of water quality. Proposed unconventional gas extraction is associated with the risk of gas or contaminated water escaping into local ground water or into the sea-bed of the Firth of Forth. It is therefore essential for communities close to this activity that monitoring of water quality takes place regularly, transparently and close to drilling sites.

3.7 Sections 6.45 and 6.46 make no reference to baseline monitoring of any kind. In order to make an accurate assessment of the impact of unconventional gas extraction, there must be baselines of air, ground water and surface water quality. These should take place for at least one year before any activity begins to allow for seasonal variations and ideally for several years to allow for variations in weather between years. Without these baselines, any attempt to hold potential polluters to account will be restricted and environmental monitoring would therefore be insufficient to protect the environment.

3.8 Re Section 5.5 It is quite clear that buffer zones based on the new risk assessment have become extremely important, to the extent that an inadequate proposal for a buffer zone may lead to a refusal of planning permission. Section 6.53 makes reference to buffer zones of 500m to protect communities from noise, dust, vibration and visual intrusion. This buffer zone does not consider the potential for air and water pollution which should necessitate a much larger buffer zone.

The new Scottish Planning Policy clearly lays out the requirement for a sophisticated buffer zones assessment around any unconventional gas proposals, and this is the minimum requirement that Fife Council should specify.

3.9 Re Section 5.5 We think that **as a minimum safeguard Fife Council should follow the lead of the Government in New South Wales**, Australia, which has introduced a 2km buffer zone between communities and sensitive industries and onshore gas drilling sites, including all above ground infrastructure and underground boreholes.

3.10 In Applying Policy 15 - Minerals is overly optimistic in its depiction of the impacts of underground coal gasification. While the technique does have a long history, the

results have been very chequered, with major episodes of water contamination. Further language should reflect the unique challenges and dangers of this type of unconventional gas.

In closing we again recommend that the Fife Council take this opportunity to ban unconventional gas through its Local Development Plan and baring that to implement a moratorium. We would be happy to discuss any of the comments or proposed changes.

ⁱ Scottish Government Electricity Generation Statement 2012

<http://scotland.gov.uk/Resource/0038/00389294.pdf>

ⁱⁱ See section <http://www.scotland.gov.uk/Resource/0042/00421076.pdf> Promoting Responsible Extraction of Resources (sections 166- 179)

ⁱⁱⁱ International Energy Agency, Are We Entering a Golden Age of Gas? 2011

<http://www.worldenergyoutlook.org/goldenageofgas/>

^{iv} <http://www.smh.com.au/national/health/doctors-raise-alarm-over-toxic-coal-seam-gas-leaks-20121116-29hbp.html>

^v Symptomatology of a gas field - An independent health survey in the Tara rural residential estates and environs, Geralyn McCarron, April 2013

http://d3n8a8pro7vhmx.cloudfront.net/lockthegate/pages/49/attachments/original/1367333672/2013-04-symptomatology_of_a_gas_field_Geralyn_McCarron.pdf?1367333672

^{vi} <http://frackfreescotland.files.wordpress.com/2012/10/nature-vol-482-feb-2012-air-sampling-reveals-high-emissions-from-gas-field.pdf>

^{vii} <http://dyson.cornell.edu/research/researchpdf/wp/2012/Cornell-Dyson-wp1212.pdf>