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Respondent Information Form

Please Note this form **must** be completed and returned with your response.

Are you responding as an individual or an organisation?

☐ Individual

☐ Organisation

Full name or organisation's name

Phone number

Address

Postcode

Email

If you are responding on behalf of an organisation, please select a type/sector that best describes your organisation.

☐ Business / industry

☐ Academic / research

☐ Professional / trade body

☐ Public body

☐ Third sector / NGO

☐ Community group

☐ Other (please provide further details below)

The Scottish Government would like your permission to publish your consultation response. Please indicate your publishing preference:

- ☐ Publish response with name
- ☐ Publish response only (without name)
- ☐ Do not publish response

Information for organisations:

The option 'Publish response only (without name) is available for individual respondents only If this option is selected, the organisation name will still be published.

If you choose the option 'Do not publish response', your organisation name may still be listed as having responded to the consultation in, for example, the analysis report.

We will share your response internally with other Scottish Government policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for Scottish Government to contact you again in relation to this consultation exercise?

- ☐ Yes
- ☐ No

NAME AND ADDRESS

Consultation on Unconventional Oil and Gas
Onshore Oil and Gas Team
The Scottish Government
3J South
Victoria Quay
Edinburgh EH6 6QQ

Date:

Dear Sir / Madam

I am writing to support the campaign against unconventional gas extraction in Scotland to protect our health, economy, landscape and environment. I want Scotland to be world leaders in renewable energy thereby reducing the impact of carbon emissions into our atmosphere causing climate change. I support the submission of the Broad Alliance representing community organisations and people across Scotland to the national consultation. To this end I would ask the Scottish Government to support the collective evidence of the Broad Alliance and that of partner organisations, such as SLAUG to ensure a national ban be applied in Scotland. In addition I would like to submit concerns:

Health
- Airborne and water borne environmental hazards would be likely to occur as a result of unconventional oil and gas operations.
- Fracking and disposal of waste water into deep injection wells have been found to be associated with increased seismicity.
- Sufficient evidence of respirable crystalline silica (a component of hydraulic fracturing fluids) have occurred at levels that could pose a risk to the health of workers.
- Evidence that hazards, such as airborne polycyclic aromatic hydrocarbons and trophospheric ozone and waterborne total dissolved solids and metal ions have occurred at levels that could risk health of residents.
- Waterborne methane has occurred at levels that pose a potential explosive risk.
- We believe there are inadequacies in the current regulatory framework in Scotland to monitor such threats.
- The health evidence, despite some inadequacies, justifies adopting a precautionary approach. This should adopt best practice, regulatory frameworks and community engagement including a ban on all wells within a 2km radius of any households in Scotland.

Greenhouse gas emissions
- There are considerable uncertainties about the implications of unconventional oil and gas for greenhouse gas emissions.
- There should be a strong regulatory framework if exploitation of unconventional oil and gas goes ahead in Scotland to 'guarantee' the protection of communities and ensure personal accountability of breaches. The current regulatory framework for greenhouse gas emissions in Scotland is unclear about who is responsible for what. There may be gaps in current regulations over emissions to air, including fugitive methane.
- Exploiting unconventional oil and gas by fracking on a significant scale is not compatible with Scottish climate change targets unless three tests are met:
  - Emissions from well development, production and decommissioning must be strictly limited, with tight regulation and close monitoring.
  - Fossil fuel consumption must remain in line with the requirements of Scottish emissions targets. Without carbon capture and storage, the use of fossil fuels in power generation, transport and buildings must be eliminated by 2060.
  - Additional production emissions from shale wells will need to offset through reductions elsewhere in the Scottish economy.

Economics
- Unconventional oil and gas would only represent 0.1% of the Scottish GDP (central estimate)
- By 2062, shale gas cumulative output is estimated at 947 billion cubic feet (central estimate) at current rates this represents 5.5 years of Scottish consumption. This assumes 20 pads, 15 wells per pad and production lifetime of each well of 15 years (central estimate). At peak, an estimated 80 full-time equivalent jobs per pad would be created or 1,400 jobs in total (central estimate) but at what cost to tourism, property valuations and renewable energy jobs?
- If oil and gas prices were to remain at historically low levels it would be unlikely that unconventional oil and gas resources in Scotland could be developed economically. An extended period of low prices would make development unattractive and economic benefits would not materialise.

- Development of unconventional oil and gas in Scotland would rely on an ability to obtain appropriate finance to support exploration and extraction. This would likely be detrimental to investments in renewable energy.

Transport
- Local communities will experience rises in traffic numbers, potentially for a number of years, with increases in noise, emissions, road damage and risks of accidents.
- Each shale gas well pad could require 13,000-93,000 vehicle movements over 20 years.
- Coal bed methane well pads would require about 93,000 vehicle movements over 12 years.
- Traffic movements could be 190 a week for two years during the development of a pad with 15 wells.
- Other impacts include road surface damage, increased risk of accidents and release of hazardous material, air pollution, noise, threat to nature conservation.
- All planning applications for unconventional oil and gas developments should require an Environmental Impact Assessment and Traffic Management Plan and be a minimum 2km from any residential household.
- Enforcement officers should be appointed to ensure mitigation measures are implemented and enforced.

Induced seismic activity
- A magnitude 4.4 earthquake (the largest linked to fracking at the time the report was compiled) would be felt by many people and may even cause some superficial damage if it happened in central Scotland.
- There is a small probability of induced earthquakes large enough to be felt but the longer term impact on the strata below ground is uncertain.
- Increases in earthquake activity in the US have been linked to waste water injection.
- Lack of historical data and low background activity makes it hard to identify areas which might have a greater risk of induced seismicity from unconventional oil and gas operations.

Decommissioning, site restoration and aftercare
- There is a regulatory gap and lack of any mechanism requiring long-term monitoring and responsibility for wells.
- Decommissioned wells may leak gases if poorly constructed and abandoned contrary to international standards and industry best practice.
- Poorly constructed wells may leak methane to air and allow subsurface leaks into groundwater as experienced at numerous sites where fracking has occurred worldwide.
- Although the risk may be low, where hydrocarbons are under pressure the risk is greater if well integrity fails.
- Leaks from decommissioned wells should be monitored for as long as the Scottish Environmental Protection Agency considers necessary.
- Leaks from above ground tanks and pipes could contaminate ground and surface water.
- Scotland's regulatory framework for decommissioning needs to ensure appropriate bonds and accountability. Devolution of licensing to the Scottish Government is an opportunity to strengthen powers requiring operators to provide financial guarantees to cover liabilities.
- An annual levy on consented wells or a mutual fund should be established to cover the costs of repairing leaking.

I am of the view that 'The Paris climate change agreement' makes it imperative that we move to a post carbon economy. We need a permanent ban on the exploitation of unconventional oil and gas by any means, including test drilling in Scotland as these activities are wholly at odds with Scotland's obligations under this international agreement. Under the obligations of the agreement Scotland requires to make significant carbon reductions and hold the increase in the global average temperature to well below 2°C. However if we continue to exploit new forms of carbon fuel and increase pollution during the extraction and combustion of fracking this decision will be in direct opposition to agreement.

Scotland needs a safe, sustainable future. Does Scotland need fracking? No. Will fracking improve the health of Scotland? No. Will fracking improve the climate of Scotland? No. Will fracking improve the landscape of Scotland? No. Does Scotland want fracking? No. Scotland needs the Scottish Government to stand up not just for the people of Scotland but for the very earth that sustains us. Now is the time to take a bold, positive path towards a better Scotland, a positive Scotland and a sustainable Scotland for the betterment of all.

Yours sincerely

SIGNATURE