

Introduction

Friends of the Earth Scotland exists to campaign, with partners here and across the globe, for a just transition to a sustainable society. We are Scotland's leading environmental campaigning organisation; an independent Scottish charity with a network of thousands of supporters and active local groups across Scotland. We are also part of the largest grassroots environmental network in the world, uniting over 2 million supporters, 75 national member groups, and some 5,000 local activist groups – covering six continents.

Friends of the Earth Scotland welcomes the invitation to respond to the Scottish Government's call for evidence on this Legislative Consent Motion. The climate crisis demands that we urgently shift away from fossil fuels to a 100% renewable energy system, by way of a just transition for impacted workers and communities.

We do not take a view on whether the Scottish Parliament should withhold consent from provisions of the Bill on the basis argued by the Scottish Government. However, in general Friends of the Earth Scotland supports the principles of democratic decision making. A just transition must engage impacted communities at every stage of energy development and decommissioning.

Moreover, as many elements of the UK Energy Bill appear to have the objective of enabling continued use of fossil fuels and technologies that would delay the transition to renewables, we call on the Scottish Parliament to oppose those provisions in principle, on the basis that they are at odds with meeting our legally binding climate change targets, and doing Scotland's fair share of meeting the goals of the Paris Agreement.

1. Licensing of Carbon Dioxide Transport and Storage: the Scottish Government says that the Scottish Parliament should withhold consent to a number of provisions in this Part of the Bill;

Friends of the Earth Scotland is extremely sceptical about the use of Carbon Capture and Storage (CCS). CCS is a technology that is unproven at scale, and even at the most generous estimates is unlikely to be up and running in time to meet our 2030 climate commitments. The Scottish Government's own CCPu monitoring report states that "*it is unlikely that a new NETs power facility will be developed in the 2020s.*" Friends of the Earth Scotland is of the opinion that neither the UK nor the Scottish Government should be wasting time and resources developing unproven-at-scale technologies that will serve primarily to prolong the life of fossil fuel industries.

Carbon Capture and Storage provides oil and gas companies with the excuse they need to keep on extracting fossil fuels, while claiming a magical technological

solution is just around the corner. Reliance on Carbon Capture and Storage keeps power in the hands of big business over communities. It risks diverting investment and limited resources away from proven actions we know can help achieve our crucial climate targets, create jobs and improve wellbeing such as insulating homes and boosting public transport.

Gambling that these technologies might work also leaves no long-term security for workers in the affected sectors. Time and money would be better spent on creating secure, quality, jobs through a just transition away from fossil fuels to renewable energy

Research by the Tyndall Centre highlighted that there are currently only 26 operational CCS plants in the world, with 81% of carbon captured to date used to extract more oil via the process of Enhanced Oil Recovery [EOR], and at this stage CCS planned deployment remains dominated by EOR. It is also crucial to note that fossil fuel-based CCS is not capable of operating with zero emissions. Many projections assume a capture rate for CCS of 95%, however, capture rates at that level are unproven in practice. According to the UK Committee on Climate Change the only two commercial hydrogen plants that use CCS today only capture approximately 60% of their carbon emissions.¹ Additional research assessing the lifecycle emissions of the Shell hydrogen plant in Canada suggests that the capture rates are less than 40% of all greenhouse gases.²

Fossil fuel-based CCS will continue to entail residual, process and supply chain greenhouse gas emissions. It is Friends of the Earth's view that fossil hydrogen with CCS should not be pursued relative to remaining carbon budgets.

2. Carbon Dioxide Capture, Storage etc. and Hydrogen Production: the Scottish Government indicates in the Memorandum that the Scottish Parliament should withhold consent to a number of provisions in this Part of the Bill;

As mentioned above Friends of the Earth Scotland is very sceptical about the use and deployment of CCS across Scotland.

While there are some limited use cases for hydrogen energy in Scotland it is vitally important that any hydrogen production in Scotland is green hydrogen made from renewables. While the top priority for renewables should be to create electricity for direct use in heating our homes or powering our transport, there will be exceptional

¹ <https://foe.scot/resource/report-hydrogens-role-in-scotlands-climate-journey/>

² <https://www.globalwitness.org/en/campaigns/fossil-gas/shell-hydrogen-true-emissions/>

circumstances where using renewable power to make green hydrogen might make sense. These could be in remote areas or to supply hard-to-decarbonise industries such as making steel. However, the expansion of green hydrogen nationwide represents a real risk of diverting efforts away from cheaper and more readily available options such as electric buses, trains and heat pumps. What we need to focus on is justly ending our reliance on fossil fuels and delivering transformational change across our society by choosing solutions we have now and which we know work

Any renewable energy intended for green hydrogen production must be sourced from additional or surplus renewable energy capacity. This will ensure renewables are not diverted from decarbonising the electricity grid and prevent the need for fossil fuels to fill the gap

Blue hydrogen is made from fossil gas, a process which still releases carbon dioxide and methane emission. Proposals for fossil hydrogen rely on Carbon Capture and Storage (CCS) technology to capture emissions. Recent research³ shows that while carbon dioxide emissions are lower from blue hydrogen than grey (fossil hydrogen without CCS), methane emissions are higher (and are 86 times more impactful than carbon dioxide) because of an increased use of fossil gas to power the carbon capture associated with blue hydrogen production.

Further, the greenhouse gas (GHG) footprint of blue hydrogen is more than 20% greater than burning natural gas or coal for heat. Due to the increased GHG emissions from fossil hydrogen and its reliance on expensive and unproven CCS technologies it is our view that fossil fuel hydrogen projects should not be pursued in Scotland in line with the urgent need for a phase out of fossil fuels to stay within the 1.5 temperature limit set by the Paris Agreement.

Recognising the greater efficiency, lower costs and lower emissions of electrification⁴ when compared to hydrogen, the Scottish government must prioritise electrification over hydrogen, particularly in heating and transport and support the use of green hydrogen only in sectors where direct electrification is not possible.

In addition, any renewable energy intended for green hydrogen production must be sourced from additional or surplus renewable energy capacity. This will ensure renewables are not diverted from decarbonising the electricity grid and prevent the need for fossil fuels to fill the gap.

Clause 56 Would suggest that the Scottish Government provide their own definition of what “low carbon hydrogen” could be. It is the view of Friends of the Earth Scotland that “low carbon hydrogen” is a misleading term and should never be applied to the creation of blue hydrogen which is created from fossil fuels.

³ <https://onlinelibrary.wiley.com/doi/full/10.1002/ese3.956>

⁴ <https://foe.scot/resource/report-hydrogens-role-in-scotlands-climate-journey/>

3. New Technology: the Scottish Government recommends that the Scottish Parliament withholds consent in relation to provision on Low Carbon Heat Schemes;

n/a

4. Heat Networks: the Scottish Government says that the Scottish Parliament should withhold consent to a number of provisions in this Part of the Bill;

Any provisions for heat networks must be able to take account of local concerns, and local differences in needs and wants for heating and energy. In order to have a people led Just Transition we must engage with local communities at all stages of the processes.

5. Oil and Gas: the Scottish Government says that the Scottish Parliament should withhold consent to a number of provisions in this Part of the Bill;

The exploration for and development of any new fossil fuels is fundamentally incompatible with both the global goal of limiting warming to 1.5°C⁵, and Scotland's national target of net zero emissions by 2045 and the urgent interim target for 2030. Friends of the Earth Scotland position is clear; we must urgently wind down our extraction and use of oil and gas. Experts at the Tyndall Centre for Climate Research have calculated that for only a 67% chance of keeping to 1.5°C, the UK must end oil and gas production by 2031.⁶ This date takes into account the disproportionate historical role the UK has played in causing the climate crisis, and the fact that oil and gas is a relatively small part of the overall economy. This date also gives us time to ensure the transition is fair to workers and communities who currently rely on the industry for their livelihoods.

The Scottish Government's acknowledgement that '*unlimited extraction of fossil fuels is not consistent with our climate obligations*' is welcome, but it must go further and set an end date for oil and gas in Scotland.⁷ Crucially, for any chance of a liveable planet, no new licences, inshore or offshore, should be approved by either the UK or Scottish Governments.

It is Friends of the Earth Scotland's position that the Scottish Government and Parliament should make every move possible, including through the upcoming Energy Strategy, the NPF4, and speaking out publicly, to object to new oil and gas fields in the North Sea.

6. General regulation-making power (clause 238): the Scottish Government says this clause is too wide, as it would give the UK Government powers to amend or repeal Scottish legislation; and

⁵ <https://www.iea.org/reports/net-zero-by-2050>

⁶ [https://www.research.manchester.ac.uk/portal/en/publications/phaseout-pathways-for-fossil-fuel-production-within-pariscompliant-carbon-budgets\(c7235a8e-e3b1-4f44-99de-c27958c03758\).html](https://www.research.manchester.ac.uk/portal/en/publications/phaseout-pathways-for-fossil-fuel-production-within-pariscompliant-carbon-budgets(c7235a8e-e3b1-4f44-99de-c27958c03758).html)

⁷ <https://www.gov.scot/news/unlimited-recovery-of-hydrocarbons-not-sustainable/>

N/a

7. Any general views you may have on how best to ensure effective cooperation on, and implementation of, energy policy across Great Britain or the UK, or those particular aspects of energy policy in which you have a professional interest. Are additional mechanisms or processes for intergovernmental cooperation needed, or for ensuring that the Scottish Parliament (or other sub-national UK legislatures) have an opportunity to consider powers made under the UK Bill that might affect devolved competence?

n/a