

Roseanna Cunningham & Paul Wheelhouse
St. Andrew's House
Regent Road
Edinburgh
EH1 3DG
Sent by email only

Dear Roseanna Cunningham and Paul Wheelhouse,

Grave doubts about Bioenergy with Carbon Capture and Storage (BECCS)

We are writing to you in your respective roles as Cabinet Secretary for Environment, Climate Change, and Land Reform and Minister for Energy, Connectivity, and the Islands.

Our organisations are deeply concerned about the possibility of Bioenergy with Carbon Capture and Storage (BECCS) being developed in Scotland and included in the forthcoming Climate Change Plan update. BECCS technologies to capture carbon dioxide from burning biomass remain technically and economically unproven and there is no clear evidence that they can ever be implemented sustainably.

To rely on BECCS to reach net-negative emissions in the electricity sector, as has been suggested by the Scottish Government, is simply not credible. If the technology was ever to become technically and commercially viable, it could result in greater carbon emissions due to increased logging and/or land use change. This would make our climate change targets of 75% emission reductions by 2030 and net-zero emissions by 2045 much more difficult to achieve. On the other hand, relying on a technology which cannot be implemented in order to reach climate targets could also lead to targets being missed.

Large-scale biomass energy demand is already seriously disrupting biodiverse forest ecosystems throughout the globe and, correspondingly, the communities and wildlife that maintain and rely on them¹. Any increase in support or demand for biomass has significant potential to exacerbate this disruption.

We therefore urge the Scottish Government to avoid incorporating BECCS into its economic response to Covid-19 and upcoming Climate Change Plan and Energy Strategy. Priority should instead be given to a just and green recovery which supports forest protection and restoration, and investment into genuinely sustainable and renewable energy.

In this letter we will cover some of the concerns around BECCS adoption in Scotland.

¹ <https://www.dogwoodalliance.org/wp-content/uploads/2019/07/Biomass-Investigation-Booklet-2019.pdf>

1. Risk of exacerbating rather than mitigating climate change

Biodiverse forests are vital protection against the climate and ecological emergencies. Protecting mature forests and allowing more land to revert to forest and other natural ecosystems is a vital part of our efforts to sequester and store carbon. Large-scale tree burning for biomass energy is not compatible with this need, and any level of BECCS implementation would further increase demands for extraction of wood and other types of biomass.

To date, the only working example of BECCS anywhere in the world is the capture of CO₂ from ethanol fermentation. This process² emits more carbon than it sequesters once the fossil fuels burnt during the refining process and the emissions released by land-use change are taken into account.³ Cutting down trees for energy production exacerbates the climate crisis because it takes too long for new trees to grow back, and forest ecosystems that are logged will not recover for many decades, if ever.

2. High risk to nature

The suggestion from the UK Committee on Climate Change (CCC) that Scotland could grow and supply around 33% of all UK biomass and would therefore be an ideal location for BECCS⁴ is extremely concerning. Existing demand for biomass energy in the UK far exceeds the availability of genuine biomass residues and wastes. If BECCS was applied on a large scale in Scotland, it would increase the demand for wood and land, and therefore add pressure on woodland and other biodiverse ecosystems.

The world's only example of a pilot BECCS project involving the burning of biomass - one which has not succeeded in sequestering any carbon so far - is at Drax Power Station in Yorkshire. Drax is the world's biggest biomass burner and routinely sources pellets made from clearcut, coastal and hardwood forests in the Southeastern USA as well as from forests in the Baltic States⁵. These forests are home to countless rare and endangered species and Scotland must not have a role in their destruction.

In Scotland, biomass electricity relies heavily on burning domestic wood from tree plantations,⁶ most of which are Sitka spruce. The Forestry Strategy for Scotland highlights the major role of biomass energy in the overall demand for wood, itself one of the 'strategic drivers' of expansion⁷. Conifer plantations may be faster growing than native woodlands and thus preferred for bioenergy, but they provide little habitat for wildlife.⁸

European biofuel policy⁹ has shown that large-scale demand for crop-based biofuels causes large-scale land-use change. In the case of European crops, it involves more intensive

² http://www.pfpi.net/wp-content/uploads/2018/04/UPDATE-800-signatures_Scientist-Letter-on-EU-Forest-Biomass.pdf

³ carbonbrief.org/analysis-negative-emissions-tested-worlds-first-major-beccs-facility

⁴ <https://www.theccc.org.uk/wp-content/uploads/2019/05/Net-Zero-The-UKs-contribution-to-stopping-global-warming.pdf>

⁵ https://www.biofuelwatch.org.uk/wp-content/uploads/drax-briefing-update-2020_compressed.pdf

⁶ <https://www.ofgem.gov.uk/publications-and-updates/biomass-sustainability-dataset-2018-19>

⁷ <https://www.gov.scot/publications/scotlands-forestry-strategy-20192029/pages/6/>

⁸ http://www2.rspb.org.uk/Images/Forestry%20and%20climate%20change%20report%20Feb%202020_tcm9-478449.pdf

⁹ https://ec.europa.eu/energy/sites/ener/files/documents/Final%20Report_GLOBIOM_publication.pdf

agriculture with greater agrochemical use, contributing to the decline in farmland birds, animals, insects and wildflowers.

3. Diverts resources from meaningful responses to the climate emergency

We urge the Scottish Government not to rely on speculative negative emissions technologies such as BECCS in the energy sector to make up for, or “undo”, carbon emissions. These unviable technologies distract us from the urgent action needed to tackle emissions at source and meet our climate targets.

Scotland’s new 2030 climate target requires urgent action to reduce emissions, and the costs - both financially and environmentally - of trying to develop BECCS are huge, representing a real risk of diverting much needed resources and financing away from proven and effective responses to the climate and biodiversity crises which, unlike BECCS, can be implemented immediately.

The Scottish Government must end support for new fossil fuel developments, focusing instead on ensuring a Just Transition that protects the livelihoods of communities which currently rely on high carbon industries. Swift efforts must be made to upscale truly clean energy, to develop a mix of energy storage systems at scale and to greatly expand the roll out of heat pumps and the insulation of homes.

The Scottish Government must invest in, and provide policy support for, increasing biodiverse forest and woodland cover and the protection of forest, peatland and wetland ecosystems which naturally sequester carbon prioritising the expansion of native woodland through tree planting and natural regeneration.

We would very much welcome a meeting to discuss further the role of bioenergy and BECCS in climate and environmental policy in Scotland.

Yours sincerely,

[The undersigned]

Alison Stuart - Director, Aberdeen Climate Action

Almuth Ernstig - Co-Director, Biofuelwatch

Julie Williams - Chief Executive, Butterfly Conservation Scotland

Isla Scott - Organiser, Divest Strathclyde

Dr Richard Dixon – Director, Friends of the Earth Scotland

Scott Tully - Organiser, Glasgow Calls Out Polluters

Liz Murray - Head of Scottish Campaigns, Global Justice Now Scotland

Dr Kate Willis - Environmental Development Officer, Lochaber Environmental Group

Alistair Whyte - Head of Plantlife Scotland, Plantlife Scotland

Alan Carter - Co-director, Reforesting Scotland

Dr. Andrew Midgley - Senior Land Use Policy Officer, RSPB Scotland

Pete Cannell - Organiser, Scot.E3 (Employment, Energy and Environment)

Beryl Leatherhead - Convenor, Scottish Wild Land Group

Steve Micklewright - Chief Executive Officer, Trees for Life

Carol Evans - Director, Woodland Trust Scotland

Sarah Dolman - Policy Manager, Whale and Dolphin Conservation

Holly Gillibrand - Environmental Activist (Youth Climate Striker)