

Email to: BioenergyPolicy@gov.scot

12 June 2024

To whom it may concern,

Consultation Response: Draft Bioenergy Policy Statement

Scottish Renewables is the voice of Scotland's renewable energy industry. Our vision is for Scotland leading the world in renewable energy. We work to grow Scotland's renewable energy sector and sustain its position at the forefront of the global clean energy industry. We represent over 350 organisations that deliver investment, jobs, social benefits and reduce the carbon emissions which cause climate change.

Our members work across all renewable energy technologies, in Scotland, the UK, Europe and around the world. In representing them, we aim to lead and inform the debate on how the growth of renewable energy can help sustainably heat and power Scotland's homes and businesses.

Key points

- Biomass is currently an important low-emission renewable heating option available to rural households, businesses and communities.
- We would also highlight bioenergy's role in energy storage and as a backup power source for district heating and large heat pumps.
- It is essential that changes or restrictions in bioenergy policy do not result in businesses moving away from bioenergy prematurely and reverting to higher carbon alternatives.

Scottish Renewables would be keen to engage further with this agenda and would be happy to discuss our response in more detail.

Yours sincerely,



Helen Melone
Head of Heat & Solar | Scottish Renewables

Consultation Questions

We are responding to this consultation with a focus on bioenergy for heat.

1. Do you agree with the overarching principles for use of bioenergy, as set out in this document?

We agree with the overarching principles set out for the use of bioenergy, particularly that biomass must be as sustainable as possible, as this would then count as renewable. Biomass is currently an important low-emission renewable heating option available to rural households, businesses and communities. Sustainable biomass can continue to play an important part in the decarbonisation of Scotland's manufacturing sector.

The Scottish Government's previous renewable heat target was set out by the Climate Change (Scotland) Act 2009. The target was 11% for the proportion of non-electrical heat demand in buildings supplied by renewable sources of heat by 2020. The main contributor to this target was biomass boilers. Consideration should be given to the impact that moving away from biomass would have on the new provisional renewable heat target of 22% by 2030¹.

Sustainable bioenergy should also be allowed for heating where electrification may not be a viable option. This could be a result of a lack of local electricity network capacity, challenges with improving insulation performance of 'hard to treat' buildings or where physical characteristics of buildings present challenges to installing alternatives. Failure to allow this would leave many rural households and businesses without adequate, or financially feasible options to decarbonise.

Bioenergy has a role in energy storage and as a backup power source for district heating and large heat pumps. This is illustrated by projects such as Simpsons Malt at Berwick², where a 12MW electrode boiler was deployed to utilise constrained wind generation. This will be 'backed up' by 18MW of biomass boiler capacity, which will operate at times of lower wind output.

It is essential that changes or restrictions in bioenergy policy do not result in businesses moving away from bioenergy prematurely and reverting to higher carbon alternatives.

We agree with the proposal that bioenergy can be used in the short to medium term for heat, such as biomethane injection to the gas grid, where it is locally available. Local district heating systems will need to use sustainable biomass for longer than this, as there may not be alternative local heat sources. In those specific cases, biomass should be used for longer. As stated in the consultation document "*biomass or biofuels may be the only solution for existing properties that are currently not suitable for clean heating systems*".

¹ Heat in Buildings Strategy. Scottish Government. October 2021

² <https://www.ampcleanenergy.com/articles/revolutionising-the-scotch-whisky-sector-amp-clean-energy-and-simpsons-malt-limited-collaborate-to-tackle-carbon-emissions-and-grid-constraints/>

We support the continued use of sustainable bioenergy in properties where owners have already invested in the installation of bioenergy heating systems, which are contributing to Scotland's renewable energy targets and where, in many instances, properties will continue to be supported by the Renewable Heat Incentive payments. It is likely that the owners/managers of these properties will have ruled out alternatives at the point they installed biomass heating for reasons related to either cost or technical feasibility – or both.

2. Do you agree with the priority uses of bioenergy, as set out in this document?

We understand that BECCS is the priority role for biomass in the longer term, however as we answered in Q1, the specific use of bioenergy for small-scale district heating systems should continue into the longer term. There is a risk that these heating systems will have to revert to fossil fuel-based heating systems if the option of biomass is removed as a heating source.

We agree with the longer-term projection for bioenergy, as having: *“limited use in district heating and potentially biomass / biofuel heating systems in existing homes where no other clean heating solutions are suitable”*.

Bioenergy can be a transition solution to move away from high carbon fossil fuels. Use of biomethane, a by-product of food waste, contributes to our circular economy goals. Biomethane can be considered sustainable when used close to its production and not transported over long distances.

Many existing heat networks use Combined Heat and Power (CHP) plants as their main heat source. Therefore, this policy statement must dovetail with existing and proposed heat network regulations arising from the Heat Networks (Scotland) Act 2021, for example, regulations for heat network licences. Proposals for the licenses include the heat networks licence holder having to prepare a Decarbonisation Plan for existing heat networks.

We agree that the bioenergy sector should prioritise the use of available waste feedstocks and must comply with the principles of a circular bioeconomy and a cascading use of biomass. However, it is important to note the role that bioenergy plays in decarbonising industry in the short to medium term, mainly due to its lower cost technology and broader applicability than other forms of low-carbon heat, such as hydrogen.

As stated in the consultation, non-domestic users account for 90 per cent of wood fuel use in Scotland, and biomass can continue to play a key role in the decarbonisation of manufacturing in the short- to medium-term. This would create the ideal conditions for the rollout of BECCS at the point that the technology is sufficiently mature, transport and storage infrastructure is available, and there is an economic business model.

We are aware that manufacturing facilities in Scotland are actively progressing biomass projects as a way of decarbonising process heat. These projects cover key sectors of the economy, such as distilling, food and drink, building materials manufacturing, paper and chemical manufacturing. There is a risk that these types of projects could be delayed or cancelled if there is uncertainty over the potential lifetime of new biomass assets, delaying industrial decarbonisation.

3. Do you agree with the intention to phase out unabated combustion of biomass?

As stated in the consultation, the majority of Scotland's renewable heat currently comes from bioenergy systems, with 67% coming from biomass. The Scottish Government must be realistic about the timescales within which existing and future biomass combustion projects will be able to capture and store carbon emissions. This is particularly relevant where remote rural properties are unable to decarbonise their heating, due to rural locations and limited access to the grid.

We have concerns about the inclusion of bioenergy in the definition of polluting heating systems. The IPCC in its 2019 Refinement of the 2006 Guidelines for National Greenhouse Gas Inventories³ stated:

"Bioenergy needs to be treated differently to gas boilers because biogenic carbon is different to fossil carbon – as described by the IEA and IPCC in their greenhouse gas emissions inventory".

According to the Energy Saving Trust in their most recent report on wood fuel demand⁴, biomass not only contributed 3,730 gigawatt hours of useful heat output to the Scottish Government's renewable heat targets but "wood fuelled biomass systems in Scotland are estimated to have saved 1,624,000 tonnes of carbon dioxide equivalent (tCO₂e) in 2021" which was a 6% increase on the 2020 figures. It is hard to understand the possible rationale for phasing out this type of heating before there is a competent alternative technology to take its place.

Regarding industry, there are still challenges in deploying aspects of CCUS technology, with both practical and economic issues, particularly on sites outside of industrial clusters. It may take longer than currently envisaged for this to become a mainstream part of the energy sector.

4. Should there be a minimum threshold at which carbon capture should be considered for bioenergy technologies and should refurbishment of plants also be included?

Yes, there should be a minimum threshold of at least 10MW before carbon capture is considered. Otherwise BECCS could be required on every house or office with biomass heating.

Smaller scale biomass or bioenergy heat networks should not face the high costs of carbon capture technology.

5. From what date should any mandate to consider carbon capture technology be implemented for bioenergy plants?

³ See 2.3.3.4 (Chapter 2, page 2.4) of the IPCC 2019 Refinement of the 2006 Guidelines for National Greenhouse Gas Inventories.

⁴ <https://forestry.gov.scot/publications/1486-wood-fuel-demand-and-usage-in-scotland-2021-report/viewdocument/1486>

No comment

6. Should decarbonisation options other than fitting carbon capture and storage technology be considered suitable as part of decarbonisation requirements for biomass plants, for example use of waste heat as part of a combined heat and power (CHP) plant or heat network?

The use of waste heat for district heat networks should be incentivised at all points where it is available. There are many places within the Scottish Government's energy policy (renewable energy generation, hydrogen production, bioenergy, for example) where waste heat can be produced. The Scottish Government should establish a coherent, strategic policy framework to incentivise the use of waste heat. This would address the current situation where questions on waste heat are scattered across various policies and consultations.

7. The Climate Change Committee (CCC) advise that the UK will need 700,000 hectares of perennial energy crops by 2050 to meet their pathway to net zero. How much could Scotland contribute towards this figure and what evidence is available to support your view?

No response

8. What would encourage you to use biomass from domestic perennial energy crops as a feedstock?

No response

9. What are the opportunities or challenges to growing energy crops and what would encourage planting at a commercial scale in Scotland?

No response

10. Can you provide best practice examples which could help integrate energy crops within the landscape and within the agriculture sector?

No response

11. Can you provide best practice examples which could help restore and regenerate biodiversity, alongside energy crops?

No response