

## Biofuelwatch response to BEIS Consultation on phasing out the installation of fossil fuel heating systems in businesses and public buildings off the gas grid - January 2022

<https://beisgovuk.citizenspace.com/heat/phasing-out-fossil-fuel-heating-businesses-public/>

The following response is submitted on behalf of [Biofuelwatch](#).

### **Introduction**

The government proposal to replace fossil fuel heating systems such as oil, coal and liquid petroleum gas (LPG) in non-domestic buildings is very welcome as these fuels are [harming human health](#), [polluting the environment](#) and making the [climate crisis worse](#) so this phase out should happen as soon as possible. We agree with government proposals that favour heating technologies that are energy efficient, and agree that electrification offers the best way to achieve this. We would support a heat pump first approach.

We recognise that a greater mix of technologies is necessary for non-domestic buildings than for homes, due to their more varied uses of heat and hot water. We also recognise that there may be a strategic role for other low carbon heating systems, particularly solar technologies. However we are deeply concerned at the prospect of fossil fuels being replaced with bioenergy as a way of heating buildings.

### **Heat Pumps**

Research by Greenpeace has found that [fewer heat pumps are currently installed and sold in the UK than in many European countries](#). In order to help industry and households prepare for the replacement of fossil fuel heating, more government support is urgently needed to fund the installation of heat pumps and insulation in buildings which are not connected to the gas grid.

We agree with a heat pump first approach to replacing fossil fuel heating in buildings which are off the gas grid. Heat pumps are a crucial means of reducing carbon emissions from homes as they are [three times more efficient than gas boilers](#) and can be powered through electricity from renewable energy such as [wind and wave power](#).

The European Heat Pump Association has produced a report on [Large Scale Heat Pumps in Europe](#) demonstrating 16 examples of realised and successful projects. This particular report is an initiative of the 'Industrial & Commercial Heat Pump Working Group' which exists to *address the particular needs of manufacturers and research institutes in order to advocate for applications, solutions and products of large scale*.

The report says " *Large, industrial sized heat pumps can use renewable energy from air, water or*

*ground but also waste energy from buildings and processes to provide heating and cooling. With a proper system design both can be used, turning the one-way road of energy use into a circular energy economy. While heat pumps are known in residential application, they are much less recognized for their contribution (potential) in commercial and industrial applications. However it is this market segment, where they are quickly becoming hidden champions.”*

At Biofuelwatch our work centres around highlighting concerns around bioenergy which we will outline below. However, the above indicates that there is existing proven technology allowing the use of heat pumps to be used in a wide range of non-domestic buildings.

## **Concerns around bioenergy**

We are very concerned that the consultation proposes giving public funding to bioenergy heating systems for some off grid buildings as a replacement for fossil fuels. Far from being a ‘low carbon’ or ‘renewable’ alternative to fossil fuel for heating, the use of bioenergy for this purpose emits carbon dioxide just like burning fossil fuels, and studies have found that [burning wood is as bad for the climate as burning coal](#).

### **Solid biomass**

Burning wood in biomass boilers emits carbon dioxide just like burning fossil fuels. In early 2021, [500 scientists signed an Open Letter](#) stating that additional wood harvest for bioenergy results in "a large initial increase in carbon emissions...[which] will increase warming for decades to centuries. That is true even when the wood replaces coal, oil or natural gas".

The UK is already the [largest subsidiser of wood burning for energy in Europe](#) and the vast majority of this wood is imported from clear-felled biodiverse forests in the [Southern USA](#), [Canada](#), [Estonia](#) and [Latvia](#), with devastating impacts on forests, [wildlife](#), [communities](#) and the [climate](#).

Using public money for biomass boilers in businesses and public buildings will increase the amount of wood that the UK burns, leading to higher carbon emissions, regardless of whether this wood is imported or sourced from within the UK. Subsidising biomass for this purpose is also likely to lead to increased forest destruction and biodiversity loss. This is not consistent with meeting the UK's climate commitments and environmental sustainability objectives.

Biofuelwatch therefore believes that biomass boilers should not be eligible for government grants as they are not a sustainable form of heating: wherever it is sourced from, burning wood biomass is bad for the climate.

Instead, public funding should only be used for genuinely low carbon forms of heating such as insulation and heat pumps, including high temperature heat pumps, and solar heating systems.

We are equally concerned about the air pollution impacts of biomass boilers. Wood-burning biomass boilers emit nitrogen oxides (NOx), - NO2 has been linked to [breathing problems](#). They also emit PM2.5 particulates which can contribute to the risk of developing [heart disease and lung cancer](#). The World Health Organisation highlights that there are no safe levels of PM2.5 particulates for human health.

We urge the Government to support the installation of genuinely low carbon heat pumps, including high temperature heat pumps, and solar heating, rather than harmful biomass boilers in order to replace fossil fuel heating systems.

## **Liquid biofuels**

We are very concerned that the consultation also proposes funding liquid biofuels as an alternative to fossil fuel heating systems.

Far from being 'low carbon, 'green' or 'renewable' alternatives to fossil fuel heating, liquid biofuels make climate change, air pollution and the destruction of forests and other habitats worse.

Burning liquid biofuels such as Hydrotreated Vegetable Oils (HVO) can emit levels of ozone and other particulate matter (PM) pollution which are comparable with diesel emissions, and a major contributor to respiratory health problems.

Moreover, biofuels from vegetable oils are linked to deforestation in countries such as Indonesia, [Paraguay and Argentina](#), where [large areas of forests are being cleared](#) to make way for monoculture palm oil or soya plantations leading to less land and water being available for [communities to grow food](#).

Clearing forests to make way for energy crops is also destroying natural ecosystems that play a vital role in keeping planet-warming carbon out of the atmosphere and that are home to threatened species. Even if the feedstock from biofuels is not directly linked to deforestation or land grabbing, it almost always results in [indirect land use change](#) and therefore in precisely those impacts as well as in high carbon emissions. Even the use of [most biofuels from wastes and residues](#) is linked to such indirect impacts.

Burning liquid biofuels in off grid buildings in England for heating will increase carbon emissions and overall demand for vegetable oils, thus leading to indirect land use changes with harmful impacts on communities, wildlife, food and water supplies.

As industry residues are already fully utilised, increasing market demand for vegetable or animal fats for fuel will indirectly lead to [a rise in the use of palm and soya oil](#) - which are already linked to

deforestation in other sectors - or the use of fossil fuels elsewhere.

Any government funding for biomass boilers and the burning of liquid biofuels in buildings would therefore increase demand for imported wood and biofuels, leading to even more forest destruction, biodiversity loss, harm to communities and climate emissions. This is not consistent with government objectives on environmental sustainability, air quality or on cutting emissions.

## **The urgency of replacing fossil fuel heating with low carbon heat pumps**

Recent data has shown that the [last seven years have been the hottest on record](#) with the first analysis of global temperature in 2021 showing that it was 1.2C above pre-industrial levels. The escalating scale of the climate crisis means that the end date to decarbonise buildings and replace fossil fuel heating with low carbon heat pumps and other non-carbon emitting technologies should be as soon as possible rather than the early 2040s.

In order for this to happen it is essential for the Government to fund low carbon alternatives like heat pumps and insulation, and not invest in dangerous false solutions like biomass boilers and liquid biofuels.

Government investment in training programmes for heat pump installers is also a key means of ensuring that fossil fuel heating systems are replaced more quickly and this measure would also help to create new green jobs.

We welcome the proposals to phase out fossil fuel heating in buildings off the gas grid and feel this phase out must happen as soon as possible due to the urgency and seriousness of the climate crisis. We fully support the heat pump first approach as this is existing and proven technology which has been shown to cut carbon emissions.

Therefore, with the right policies and allocation of government funding for genuinely low carbon heat pumps, insulation and other non-carbon emitting heating solutions such as solar, a smooth transition to clean heat can begin straight away.

We would like to reiterate that we do not support funding for phasing out fossil fuels to be used to subsidise the burning of liquid biofuels or solid biomass of any kind as this is simply another route for carbon emissions to enter the atmosphere, regardless of where the wood or biofuels are sourced.

Heat pumps on the other hand provide a positive solution which can help us to lower carbon emissions from housing whilst also improving air quality and offering a secure and affordable way of heating our buildings.