

**Renewable Heat Initiative (RHI):
New subsidies for large-scale biomass imports and biofuels
CONSULTATION ENDS 26 April 2010**

What is the proposed Renewable Heat Incentive?

At present, 99% of heat in the UK is produced from fossil fuels (and in the case of electric heating also nuclear power). In order to meet EU renewable energy targets, the government aims to increase the proportion of 'renewable energy' in the heat sector to 12% by 2020. To drive the expansion of renewable heat, whether at the small, medium or large scale, DECC has proposed a new subsidy scheme - the Renewable Heat Incentive.

What are the problems with the proposal?

Like the Renewable Obligation for electricity, the RHI in its proposed form will subsidise 'high-carbon' renewable energy like bio-energy, making it more difficult for more sustainable forms of renewables that give a better carbon saving to gain market share, whilst causing more climate change through deforestation and agro-chemical use for crop and tree plantations worldwide. Renewable energy, together with massive demand reduction is important, but only if it is renewable energy which is truly sustainable and climate-friendly, and if it goes hand in hand with major reductions in overall energy use.

The proposed rules and tariffs in the RHI would direct the vast majority of subsidies towards bioenergy, including biodiesel and imported woodchips and wood pellets, rather than to solar thermal or other types of energy. Bioenergy may well be cheap— but the climate impacts of biodiesel and uncontrolled large-scale biomass expansion are likely to be worse than those of the fossil fuels they replace. The impacts of liquid biofuel production on forests and biodiversity, on communities in the global South, on food prices and food sovereignty are already severe. They will be replicated and greatly worsened by the new trade in woodchips and wood pellets, which will require ever more monoculture tree plantations and increased logging of natural forests.

The RHI seems to downplay the crucial role of energy conservation (i.e. behaviours that demand less heat energy), and energy efficiency (i.e. buildings and appliances that waste less heat by their design). For example, a householder can get paid £1,500 a year for 15 years for having biomass boiler in place, and is only required to have the house insulated to very basic standards. Such high level of payments will not encourage frugality in using fuel, indeed they seem to give the message that renewable heat is abundant and conservation is not very important.

Government consultants have shown that current policies will increase biomass use outside domestic homes from a current 450 MW to a minimum of 3.5 GW but possibly as much as 22 GW and that the bulk of the demand will be met from imports (tinyurl.com/yjmsjbw). They project that UK production of woody biomass could be as much as 3.5 million tonnes per year by 2020, whereas announced plans for solid biomass electricity power stations alone indicate an annual consumption of around 27 million tonnes. Renewable heat use of biomass would be in addition to this demand for electricity generation.

The government acknowledges that a large number of people in the UK die early as a direct result of air pollution caused by biomass burning. In a parliamentary reply on 10th December 2009, DEFRA Minister Jim Fitzpatrick reported a study which showed that in 2020, up to 1,750,000 life years will be lost in the UK due to emissions caused by bioenergy expansion. The Department for Energy and Climate Change (DECC) has already significantly watered down proposed guidelines to restrict air emissions from biomass burning which is eligible for subsidies under the RHI, following pressure from industry.

Which types of energy will be supported?

Apart from *biodiesel blends for domestic boilers*, *biomass* and *biogas*, the RHI will also provide subsidies for *heat pumps* (ground, water and air heat pumps) and for *solar thermal* energy, although solar energy will be disadvantaged: For bioenergy installations and air pumps (which are relevant on a small and medium scale only), the RHI will cover not only the cost difference between renewable energy and fossil fuel heating systems, but also compensation for any inconvenience of installing new systems and a 12% rate of return on investment. For solar thermal panels, however, the RHI will only cover the cost difference, plus a 6% rate of return. The lower subsidy rate for solar thermal panels means that those are likely to be installed at lower rates than biodiesel or woodchip boilers – DECC confirms that uptake is likely to depend on the rate of return. As well as citing the higher cost of solar thermal panels (burning biomass is

cheaper), DECC justifies this by suggesting that solar energy is well known – even though, Germany has about 28 times the solar thermal capacity as the UK (tinyurl.com/yzrr7z3).

Potentially, other kinds of bioliquids, namely pure vegetable oil and ethanol boilers, could also be included, although this is not proposed explicitly. DECC propose to exclude domestic wood stoves from the new subsidies.

The consultation paper suggests limiting subsidies for bioliquids – how ‘limited’ would they be?

DECC proposes RHI subsidies for the conversion of heating oil boilers to ones burning a blend of heating oil and biodiesel. At present, around 3 billion litres of heating oil are burned every year in the UK. If 20% of this were replaced with biodiesel, 560,000 tonnes a year would be required, which is equivalent to 45% of all biofuels currently used in the UK.

Industry is likely to lobby strongly for even greater RHI support for biofuels. In particular, they will want to see pure vegetable oil in combined heat and power stations to continue to be subsidised. In Germany, similar subsidies have led to 1,800 palm oil CHP plants being built. Another option could be bio-ethanol boilers – increasingly sold in Germany despite the risk of explosion. The RHI is not limited to space heating applications. Heat used for industrial processes is eligible. Large heat consumers might find it economically attractive to convert from natural gas to bioliquids.

Will the sustainability of bioenergy be considered?

For bioliquids, the EU’s Renewable Energy Directive will apply. This contains certain environmental standards which are widely regarded as inadequate and impossible to enforce. As of February 2010, the European Commission is considering whether to make EU standards even less effective, for example by ruling that oil palm plantations are forests and that there is no deforestation if natural forests are cut down for palm oil. Human rights and land rights are entirely ignored.

With regards to solid biomass and biogas, the government refers to the possibility of future EU standards. However, the European Commission has made it clear that there are unlikely to be any. This means that even illegally logged wood and wood from plantations established at the expense of oldgrowth forests can be subsidised as ‘renewable energy’. On the other hand, no credible certification scheme (including the FSC) exists or has been proposed which is able to preclude serious environmental and social harm. Companies will be asked to complete questionnaires to say for example whether forests or grasslands have been destroyed for biomass, but the responses will not be published and will not affect their eligibility for subsidies.

No existing standards take account of whether the overall demand is sustainable at a global level, nor whether an energy policy which relies increasingly on land and forests in other countries, particularly in the global South, is acceptable. Industry lobbyists for suppliers of biomass and bioliquids and bioenergy heat systems are already pressing DECC to water down their position on sustainability, claiming that fears about shortages of supply, competition with other more legitimate land uses, and damage to eco-systems are over-played, and will stifle the market.

Where will the biofuels and biomass come from?

92% of all biodiesel feedstock currently used in the UK is imported. The single most important feedstock is soya. Soya plantations are being rapidly expanded in countries including Brazil, Argentina and Paraguay and are linked to large-scale deforestation and thus faster climate change (soya being the main driver of Amazon deforestation); to pesticide poisoning; the displacement of growing numbers of rural communities; the destruction of indigenous peoples’ livelihoods; and to increased hunger. Palm oil currently accounts for 12% of biodiesel, but that proportion is expected to grow. If pure plant oil were to be subsidised under the RHI (as it is for renewable electricity already) then palm oil imports would attract the most funding because palm oil is the cheapest vegetable oil.

Biogas can be made from waste, including sewage – however there is a high risk of large-scale land conversion for monocultures specifically for biogas. Maize monocultures for biogas are a major cause of biodiversity losses in Germany.

Most UK companies speak about woodchips and wood pellets from eastern Europe, Scandinavia and North America. Beetle-infested wood is likely to be imported despite the risk of introducing new infestations which could decimate trees in the UK. US plantations which currently meet much of the US demand for pulp and paper will in future produce biomass for Europe, leading to more tree plantations for pulp and paper in South America and elsewhere. There is

growing competition from North American and European biomass power stations for the same feedstock and it is clear that future imports will increasingly come from Asia, Latin America and Africa. In West Papua, there are reports of large concessions being granted by the Indonesian government for tree plantations for wood pellets and wood chips for export, the Brazilian government is considering major expansion of eucalyptus plantations in view of the growing demand, and in Guyana, a UK company is establishing monoculture bamboo plantations apparently for UK bioenergy.

How to reply to the Consultation:

The consultation paper can be downloaded from <http://www.decc.gov.uk/en/content/cms/consultations/rhi/rhi.aspx>. Responses should be emailed to rhi@decc.gsi.gov.uk by 26th April.

The following questions are most relevant to biomass and bioliquids:

Q1: Are there any issues relevant to the design or operation of the RHI that are not addressed in this consultation document? If so, how should we deal with them?

Note: Concerns about the eligibility of bioenergy and about the contradiction between the commitment to reduce greenhouse gas emissions and the definition of all biomass as 'carbon neutral' can be raised here. The impact on air quality and the UK's legal commitments to reduce particulate and nitrogen oxide emissions can also be addressed here.

Also the scheme does not give much - if any - impetus to the need to reduce the levels of energy used to heat British homes and commercial building. It seems to assume that simply switching to 'renewable' heat is the answer.

Q7: Do you agree with our proposed approach to eligibility of energy sources, technologies and sites?

Q8: Do you agree with our proposed approach on bioliquids? Are you aware of bioliquids other than FAME that could be used in converted domestic heating oil boilers? If so, should we make them eligible for RHI support, and how could we assess the renewable proportion of such fuels to ensure RHI is only paid for the renewable content of fuels?

It would be important to comment not only on the government proposals to subsidise converted domestic heating oil boilers, but also on other types of bioliquids which could be included following industry representations.

Q19: Do you agree with our proposed approach on mixed fuels?

This question is also relevant for the proposed subsidies of biodiesel blends with heating oil..

Q22: Do you agree that RHI tariffs should be fully fixed (other than to correct for inflation) for the duration of any project's entitlement to RHI support? Do you agree that we should include bio-energy tariffs, including the fuel part of those tariffs, in such a grandfathering commitment?

'Grandfathering' would make it even more difficult for bioenergy subsidies to be reviewed in future.

Renewable heat technologies like solar thermal, and heat pumps are included in the RHI. They are far less environmentally damaging than using bioliquids and biomass for heating.

In general observation, it would be helpful to comment on this, asking for higher levels of support for the cleaner technologies.