Renewable Heat Incentive
Consultation on the proposed RHI financial support scheme

Please use the table below as a template to respond to the consultation. It will help us to record and take account of your views.

Also, please provide evidence for your answers and comments where possible.

RESPONSE FROM BIOFUELWATCH

INTRODUCTION
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?
YES **Comments:** 1. General Comments. Biofuelwatch agrees that there is an urgent imperative to address global warming and that deep and rapid cuts are needed in man-made greenhouse gas emissions. We fully endorse the use and expansion of renewable energy as part of the policy response to climate change, but only renewable energy that is truly sustainable and makes genuine worthwhile greenhouse gas savings. At a time of financial constraint, and with the UK carrying an historically high budget deficit, it is critical that public funding of climate change measures is directed to solutions which give the highest payback in terms of actual carbon savings and which have a viable long term future. Providing financial support to measures that have a zero or negative impact on climate change, would clearly be damaging. Like the Renewable Obligation for electricity, the RHI in its proposed form will subsidise unsustainable 'high-carbon' renewable energy from bioenergy, making it more difficult for more sustainable forms of renewables that can give real carbon savings to gain market share. Thereby slowing the rate at which we as a country reduce our carbon emissions. The majority of our feedback is concerned with the promotion of bioenergy in the RHI. It appears to us that it is premature for bioenergy to be further promoted and financially subsidised for the Heat sector when the sectors that already make extensive use of bioenergy - Transport and Power – are reviewing their expansion plans in the light of concerns about sustainability. The DfT has recently announced that it will not lay down

specific interim targets for transport renewable energy in the UK Renewable Energy National Action Plan and will consult on targets in early 2011. In the power sector, DECC is currently consulting on whether to grandfather support under the Renewable Obligation for biomass electricity, and is currently ruling out grandfathering for bioliquid use.

The proposed rules and tariffs in the RHI are likely to direct a 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.

We are disappointed that 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 minimal standards with less than half the amount of loft insulation recommended by the Energy Saving Trust (125mm vs 260mm). 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 over 26 million tonnes. Renewable heat use of biomass would be in addition to this demand for electricity generation.

2. Bioenergy carbon savings

We cite the following references and published commentary as some of the extensive evidence of the real doubts that bioenergy can produce worthwhile carbon / GHG savings once a full assessment is made of the overall impacts of their production, in particular the effects of Indirect Land Use Change.

1. N2O release from agro-biofuel production negates global warming reduction by replacing fossil fuels, Crutzen et al, January 2008

2. Fixing a Critical Climate Accounting Error, Timothy Searchinger et al, *Science* 23 October 2009, Vol. 326. no. 5952, pp. 527 - 528

3. Land Clearing and the Biofuel Carbon Debt, Joseph Fargione et al, 2008

4. Carbon payback times for crop-based biofuel expansion in the tropics: the effects of changing yield and technology, Gibbs et al, July 2008

5. THE REAL IMPACT OF GROWING BIOFUELS - Calculating Indirect Land-Use Change, Greenpeace, BirdLife International, Friends of the Earth Europe, European Federation for Transport & Environment, December 2008

6. European Environment Agency's Scientific Advisory Body, 10 April 2008
www.eea.europa.eu/highlights/suspend-10-percent-biofuels-target-says-eeasscientific-advisory-body
"The 10 % target [proposed for renewable energy in surface transport] requires large amounts of additional imports of biofuels. The accelerated destruction of rain forests due to increasing biofuel production can already be witnessed in some developing countries. Sustainable production outside Europe is difficult to achieve and to monitor. The overambitious 10 % biofuel target is an experiment, whose unintended effects are difficult to predict and difficult to control."

3. Sustainability of Bioenergy - general

More subsidies for biodiesel and wood pellets/wood chips will lead to more tree and 'energy crop' monocultures, which have serious impacts on biodiversity, ecosystem destruction, communities, soils and freshwater. In our view bioenergy should not be eligible for any subsidies. Current biofuel and biomass use and plans are already unsustainable; creating yet another demand will be harmful for climate, biodiversity and people. The same aims – i.e. greenhouse gas reductions and energy security – are achievable through other means and these should be stimulated.

With regards to solid biomass and biogas, the consultation refers to the possibility of future EU standards. However, the European Commission has announced that there will be no mandatory biomass standards in the foreseeable future. This means that even illegally logged wood and wood from plantations established at the expense of old-growth 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 and which can address indirect impacts.

Relying on a reporting requirement has been shown to be ineffective: According to the Renewable Fuel Agency reports, 90% of biofuels used for transport are imported and of those only 4% meet government standards, two years after the reporting requirement was introduced.

No standards or reporting requirement is proposed for biogas even though subsidies in Germany have led to large-scale expansion of maize monocultures at the expense of biodiversity and even carbon-rich moorlands.

4. Sustainability of Bioenergy - capacity

As proposed the RHI gives incentives for bioenergy to be used as a source of renewable heat. It proposes that biomass will be subject to compliance with a reporting requirement and biodiesel to EU standards. The outcome is clearly intended to be an increase in the amount of bio-energy used for heat. But there is no indication in the RHI of the sustainable *levels* of bio-energy that can be accommodated in the heat market. This is particularly important at a time when other energy sectors are also making claims on available bioenergy supplies – i.e. transport, power generation and, in future, aviation.

Bioenergy is a finite resource. It is a serious error to stimulate ever-increasing growth in the use of bioenergy. There must be mechanisms to assess the overall impact of current demand for wood and agricultural products as well cumulative growth across all sectors and at a national, regional and global level, and to overall manage consumption within sustainable limits. However this is not currently the case, no credible mechanism for avoiding serious environmental, social and climate impacts, including indirect impacts, from bioenergy has been proposed and economic reasons favour cheap imports particularly from the global South for any large-scale bioenergy use. We therefore believe that the precautionary principle should be applied. In the UK, this must mean a moratorium on all subsidies and other incentives for bioenergy.

According to Forestry Commission statistics, around 80% of the wood used in the UK is imported. The UK's wood, including paper consumption, is already responsible for the destruction of tropical forests and grasslands (for tree plantations) and thus for more climate change. A new large market for wood can only worsen the situation.

Of the 12% target for renewable heat by 2020, how much is expected to come from bioenergy? Have the global impacts of the UK's current wood and paper imports be taken into account before making a decision to create a new UK market?

The UK Wood Panel Industries Federation, comprising ConFor, UKFPA and WPIF, has recently expressed concerns about the impact of expanding biomass usage on their existing operations saying in their report 'Wood fibre availability and demand in Britain 2007 to 2025':

"Demand for wood fibre is forecast to increase dramatically in Britain in the next 15 years. The principal reasons behind this rise are Government policies and incentives which encourage the use of wood as a source of renewable energy. Resulting imbalances between potential availability and forecast demand are projected across the major wood fibre sources in Britain. Such developments could result in significant supply and price pressures which would have major consequences for existing wood processing industries and for the future shape of the biomass energy sector in Britain."

Allowing ecosystems including natural forests to regenerate and to continue sequestering carbon and maintaining biodiversity can play a significant and vital role in mitigating climate change and we believe that the climate impact of preventing such regeneration and

protection of ecosystems must be counted as a bioenergy 'carbon cost'.

5. Biomass extraction from forests – impacts on carbon storage

Research on terrestrial carbon sinks is developing. A recent study from the Finnish Environment Institute, Finnish Forest Research Institute and the Finnish Museum of Natural History at the University of Helsinki reports that current methods underestimate the impact of rising global temperatures on emissions of carbon stored in the soil.

(Karhu, K., Fritze, H., Hämäläinen, K., Vanhala, P., Jungner, H., Oinonen, M., Sonninen, E., Tuomi, M., Spetz, P. & Liski, J. 2010. Temperature sensitivity of soil carbon fractions in boreal forest soil. Ecology 91(2): 370-376.)

The study concludes that climatic warming will inevitably lead to smaller carbon storage in soil and to higher carbon dioxide emissions from forests. These emissions will further warm the climate, and as a consequence the emissions will again increase. The positive feedback between climate warming and soil carbon dioxide emissions will tend to accelerate climate change.

Because present climate models underestimate the increase of soil carbon emissions in a warmer climate, they also underestimate the increasing importance of carbon storage in forests. The carbon storage of forests is more sensitive to climatic warming than previously assumed, and the carbon sink capacity of forests is therefore likely to decline faster than assumed. To maintain forests' carbon storage, the accumulation of organic material in forests should increase not decrease.

This is significant for climate policy on forests. Policies that promote more and more intensive harvesting of biomass in forests, for example to supply the wood pellet heating market, could accelerate carbon release from soils as global temperatures rise.

6. Bioenergy – air quality impacts

It is acknowledged 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. Proposed guidelines to restrict air emissions from biomass burning have already significantly watered down, following pressure from industry. It is essential that the health impacts of increasing bioenergy usage should be taken into account when finalising policy.

The Rogers review of local authority regulatory services, published in 2007, said air pollution contributed to between 12,000 and 24,000 deaths each year. Government figures show that average life expectancy is reduced by up to eight months by particulate pollution. Health costs of air pollution are up to estimated to be up to £20 billion a year.

In evidence to the House of Commons Environment Audit Committee in February 2010,

Professor Frank Kelly, Professor of Environmental Health at King's College, London, estimated that 3,000 to 5,000 people were dying each year in London alone due to air pollution.

The Committee on the Medical Effects of Air Pollution reported in 2009 - Long-Term Exposure to Air Pollution: Effect on Mortality', concluding "We are left with little doubt that long-term exposure to air pollutants has an effect on mortality and thus decreases life expectancy.

Adding air pollution to London in particular will make it more difficult for the UK to meet its legal obligations under the EU Air Quality Directive 2008/50/EC, specifically to achieve the PM10 pollution standard in place since 2005. London is the one region of the UK which has been declared in default of meeting EU targets for air quality improvement. The European Commission started infringement proceedings on 29 January 2010 against the United Kingdom for failing to comply with the EU's air quality standard for PM10 pollution. If London continues to breach standards for PM10 and NO2 and demonstrates no real plan to resolve the problem, large fines are likely.

If a large Government subsidised expansion of biomass burning goes ahead, it could be cited as evidence that there is no effective plan and no resolve to reduce air pollution and that, to the contrary, policies are being implemented that actively hinder achievement of legal limit values.

CHAPTER 1: ACCESSING THE RHI

Q2: Do you see any barriers to such financing schemes coming forward? In particular, are there any limitations in leasing and finance legislation that you feel inappropriately restrict the development of RHI financing models?

NO COMMENT

Q3: Do you agree with our proposed RHI registration and payment approach? If not, can you suggest how this approach can be improved?

NO COMMENT

CHAPTER 2: ELIGIBILITY AND STANDARDS

Q4: Do you agree with our approach of requiring products and installers for installations up to 45kW within RHI to be accredited under MCS or equivalent?

NO COMMENT

Q5: Where MCS product and installer certification is extended beyond this limit, do you

agree that we should introduce the requirement of using certified installers and equipment for eligibility for the RHI?
NO COMMENT
Q6: Can you provide details of any UK or European standards that should count as equivalent to MCS? How should we recognise these standards for the RHI?
NO COMMENT
Q7: Do you agree with our proposed approach to eligibility of energy sources, technologies and sites?
NO, we do not agree Comments: 1. We agree that wood-burning stoves should be excluded from the RHI. They are wasteful and it is impractical to measure or deem their heat output. 2. We believe that only bioliquids made from genuine waste cooking oil should be eligible for support because bioliquids made from virgin vegetable oils will have an overall adverse effect on the climate and the environment. But as waste vegetable oil only accounts for 4% of biofuels used in the UK at present, it would be uneconomic and ineffective to try to create a renewable heat sector based just on this feedstock.
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?
NO, we do not agree 1. We are encouraged to see that the RHI proposals limit the financial support for bioliquids to those used in domestic settings where there is already an oil-fired heating system. This is evidence that you are thinking of limits and this approach should be extended to the whole question of bioenergy capacity as set out in our answer to Q1. 2. However, we maintain that there should be no additional subsidies for bioliquids whatever the scale – instead existing subsidies, such as ROCs for bioliquids must be ended. There is already an unsustainably high level of bioliquid use in the transport and power sectors. Creating another biofuel market through the RHI will primarily mean more soya and

palm oil imports with a disastrous impact on forests and peatlands and climate, on biodiversity and on indigenous peoples, forest communities and small farmers.

Q9: Do you agree with the proposed emissions standards for biomass boilers below 20MW? If not, why, and do you have any evidence supporting different ones, in particular on how they safeguard air quality?

NO COMMENT

Q10: Do you think the RHI should be structured to encourage energy efficiency through the tariff structure (in particular the use of deeming), or, additionally, require householders to install minimum energy efficiency standards as a condition for benefiting from RHI support?

YES

Comments:

1. It is vital that the RHI plays a major role in driving up energy efficiency in building space- and water-heating and in industrial heat-using processes. The RHI extends across all forms of heat usage, and as you say, " *To meet our UK 2020 renewable energy target, we will need a large proportion of renewable heat to be delivered by the industrial and commercial sectors. Certain industries, such as the pulp and paper, agricultural and food and drink industries, are ideally suited to switch from fossil fuels to a renewable heat source like solid recovered fuel where the calorific value and renewable content can be varied to meet user requirements.* " Yet there is no discussion or proposals addressing energy conservation, efficiency and overall sustainability in these sectors. Nor by limiting the scope to 'householders' does this question invite comments on the commercial and industrial sectors.

2. We accept that a metering system is not viable for domestic scale renewable heat installations, and that a deeming method is the only realistic alternative. However it is surprising that the indicative loft insulation levels given for houses are lower than required under the current building regulations in England.

3. We support the idea of both domestic and commercial RHI beneficiaries being required to install minimum energy efficiency standards in order to qualify, however those standards must be higher than those proposed.

4. When the details of the deeming scheme for households is developed, you will need to consider how to deal with situations such as a house being extended or converted to multiple occupancy during the lifetime of the RHI.

Q11: Can you provide suggestions for how to ensure that developers do not build to lower energy efficiency standards as a result of the RHI in advance of 2013 and 2016 building regulations taking effect?
NO COMMENT
CHAPTER 3: TARIFFS
Q12: Do you agree with our proposals on where we should meter and where we should deem to determine an installation's entitlement to RHI compensation?
NO COMMENT
Q13: Do you agree that a process based on SAP or SBEM for existing buildings or the Energy Performance Certificate for new buildings is the best way of implementing deeming? Do you have any suggestions on the details of how this assessment process should work?
NO COMMENT
Q14: Do you agree that at the large scale/in process heating, where we propose metering, the risk of metering resulting in a perverse incentive to overgenerate is low? How could we reduce it further within the constraints of using metering, to ensure only useful heat is compensated? Do you see any practical difficulties concerning use of heat meters (such as on availability, reliability or cost of heat meters) and, if so, how should we address them?
NO COMMENT
Q15: What is the right incentive level required to bring forward renewable heat from large-scale biomass including in the form of CHP while minimising costs to consumers?
NO COMMENT
Q16: What is the right incentive level required to bring forward renewable heat from biogas combustion above 200 kW including in the form of CHP while minimising costs to consumers? Do you have any data or evidence supporting your view?
NO COMMENT
Q17: Do you have any data or evidence on the costs of air source heat pumps above 350

kW or solar thermal above 100 kW?
NO COMMENT
Q18: Do you agree with the proposed approach to setting the RHI tariffs, including tariff structure and rates of return? Do you agree with the resulting tariff levels and lifetimes? If not, what alternatives would you prefer, and on the basis of what evidence?
NO 1. The rate of investment return used for solar thermal is too low relative to bioenergy. At 6% it is also lower than that apparent from the actual tariff set for Solar PV under the FIT, although the consultation suggests it is at the same rate. The consultation paper argues that low incentives for solar thermal can be offered because the technology is well known, however it is more than 20-times less well established in the UK than in Germany. Furthermore, a large-scale solar thermal programme will bring down costs. 2. The structure of the Incentive favours those householders who have access to funding for what in some cases will be high up-front purchase and installation costs. Compared to the up-front grant approach, this structure therefore disadvantages some sectors of society. There is a danger that at a domestic level the RHI will mainly be of interest to more affluent individuals. You could review the evidence from the first months experience with the FIT to see whether this is a real problem.
Q19: Do you agree with our proposed approach on mixed fuels? Do you agree with our proposal that, at larger sites, with the exception of EfW, RHI will require the use of a dedicated boiler for the renewable fuel? Where our approach is to follow the Renewables Obligation, do any aspects need to be adapted to account for the different situation of renewable heat?
NO COMMENT
Q20: Do you believe that we should provide an uplift for renewable district heating?
YES in principle but not for biofuels and biomass
Q21: Do you believe that an uplift should be available to all eligible district heating networks, or that eligibility should be determined on a case-by-case basis depending on whether a network contributes to the objective of connecting hard-to-treat properties

(and, if the latter, how should we determine this for each case)? Do you agree that situations of one or a small number of large external heat users should not be eligible for an uplift, and, if so, what should be the minimum eligibility requirement for an uplift (expressed for instance as a minimum number of external customers)?
NO COMMENT
CHAPTER 4: THE RHI BEYOND 2011
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?
NO 1. With conventional energy prices expected to rise markedly in the next few years, those who install bioenergy renewable heat systems will almost certainly gain a progressively greater financial advantage by offsetting their use of fossil fuels. They should not therefore stand to benefit from grandfathering under the RHI. We believe that the RHI should not subsidise bioenergy in the first place. However if it was subsidised, this would make it very difficult for the government to respond to new evidence of serious harm from large-scale bioenergy. 2. On the other hand, those who install electricity-based renewable energy systems are likely to see their running costs increase over time relative to natural gas, and maybe even to mineral oil or coal. Rationale – the subsidies going to renewable electricity generation will push up power prices faster than those of primary energy sources. Electricity-based systems will also be able to progressively deliver a higher level of carbon saving as the carbon intensity of the national grid reduces over time. As a mechanism to reduce overall carbon emissions, then heat pumps are more valuable over time compared with bioenergy systems, since their contribution to sustainability and climate change (which is already highly negative) worsens over time as supplies get constrained. Grandfathering should therefore apply to heat pumps. 3. For solar water, there is no running cost in terms of fuel, and the offsetting savings will therefore increase over time. This would tend to argue for not grandfathering. But if the rate of return is retained as proposed at notionally 6%, we believe the absence of grandfathering would reduce the attractiveness of this type of system to the point where many homeowners would not invest.
Q23: Do you agree with our proposal not to introduce degression from the outset of the scheme but consider the case at the first review?

YES
Q24: Do you agree with our proposed approach on innovative and emerging technologies?
YES ? (Doesn't that include bioenergy? Not sure I understand it_
Q25: Do you have any views on how we should encourage technology cost reductions through the RHI, particularly on solar thermal heat?
NO COMMENT
Q26: Do you agree with our proposed approach to reviews, and the timing and scope of the initial review?
YES
Q27: Can you provide examples of situations that could be taken into consideration in determining criteria for an emergency review?
Comments: When there are new findings concerning bioenergy sustainability
CHAPTER 5: INTERACTION WITH OTHER POLICIES
Q28: Do you agree with our proposed approach to allow access to RHI support to new projects where installation completed after 15 July 2009, but not before? Do you have any evidence showing that in particular situations RHI support for installations existing before this date would be needed and justifiable?
NO COMMENT
CHAPTER 6: ADMINISTRATION
Q29: Are there any parts of the proposals set out in this consultation that in your view would allow for unacceptable abuse of RHI support, or other unintended consequences? If so, how could we tighten the rules while keeping the scheme workable, and avoiding an overly high administrative burden?
NO COMMENT

ANNEX 3: CALL FOR EVIDENCE ON DISTRICT HEATING NETORKS
Q30: Do you agree with our proposed overall approach to setting the level of the uplift? Can you provide evidence that would help us to determine the level of uplift? In particular: • **Can you describe typical district heating networks that would be appropriate as reference networks, and what are their network costs, heat loads, and customer numbers and characteristics?** • **What proportion of the heat load of such networks is typically supplied to hard-to-treat properties? What proportion of the total network of the reference installation(s) supply heat to hard to treat properties?** **Should we choose one reference network and determine one uplift (in p/kWh) applicable to all sizes of networks, or should there be several based on a number of differently sized reference networks?**
NO COMMENT