

# Renewable Heat Incentive: Air to Water Heat Pumps & Energy from Waste

### **Renewable Heat Incentive:**

# Air to Water Heat Pumps & Energy from Waste

Presented to Parliament by the Secretary of State for Energy and Climate Change by command of her Majesty.

Department of Energy and Climate Change 3 Whitehall Place London SW1A 2AW

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The consultation and Impact Assessment can be found on DECC's website: www.decc.gov.uk/rhi

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# **Contents**

Renewable Heat Incentive:	3
Air to Water Heat Pumps & Energy from Waste	3
Contents	5
General information	7
Executive Summary	9
Within the scope of this consultation	9
Air to Water Heat Pumps (AWHP)	9
Energy From Waste (EfW)	10
Within the scope of the other non domestic consultation	10
Air to Air Heat Pumps (AAHP)	10
Biomass Direct Air Heating	10
Biogas Combustion Over 200kW	11
Biomass and Bioliquid Combined Heat and Power	11
Deep Geothermal Heat	11
Energy Efficiency	11
Other Minor Regulatory Changes	12
Calls for Evidence	12
Introduction and Background	13
The Renewable Heat Incentive	13
Support for new technologies	14
Tariff setting methodology	16
Budget Management	17
Proposals for new support	18
Air to Water Heat Pumps (AWHP)	18
Description of Technology	18

Proposed support	18
Seasonal performance factor requirements for heat pumps (Air and Ground source)	19
Changes in support	20
Energy from Waste	20
Description of Technology	20
Calls for Evidence and other technologies	21
Call for Evidence- Landfill gas	21
Call for Evidence- Ground source heat pumps	21
Call for Evidence- Biopropane	21
Call for Evidence- Large biomass tariff (>1MW)	21
Next Steps	22

### **General information**

#### Purpose of this consultation

This consultation seeks views on the Government's plans to expand the current nondomestic Renewable Heat Incentive scheme to include Air to Water Heat Pumps and broaden the eligibility criteria for Energy from Waste.

Issued: 20 September 2012

Respond by: 18 October 2012

#### **Enquiries to:**

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Consultation reference: URN 12D/350 - Air to Water Heat Pumps and Energy from Waste

#### **Territorial extent:**

This consultation applies to England, Scotland and Wales.

#### How to respond:

#### The closing date for responses is: 18 October 2012

Online responses are preferred and can be submitted via DECC's consultation hub: at the following link: https://econsultation.decc.gov.uk/

If you are unable to submit your response online please send it in an email to: <a href="mailto:rhi@decc.gsi.gov.uk">rhi@decc.gsi.gov.uk</a>. Alternatively, hard copy replies should be sent to the address above.

#### **Additional copies:**

You may make copies of this document without seeking permission. An electronic version can be found at: www.decc.gov.uk/rhi

Other versions of the document in Braille, large print or audio-cassette, including a Welsh version, are available on request via the enquiries address above.

#### Confidentiality and data protection:

Information provided in response to this consultation, including personal information, may be subject to publication or disclosure in accordance with the access to information legislation (primarily the Freedom of Information Act 2000, the Data Protection Act 1998 and the Environmental Information Regulations 2004).

If you wish information that you provide to be treated as confidential please say so clearly in writing when you submit your response to the consultation. It would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded by us as a confidentiality request.

We will summarise all responses and place this summary on our website at http://www.decc.gov.uk/consultations/Default.aspx?status=26&area=0. This summary will include a list of names or organisations that responded but not people's personal names, addresses or other contact details.

#### **Quality assurance:**

This consultation has been carried out in accordance with the Government's Code of Practice on consultation, which can be found here:

http://www.cabinetoffice.gov.uk/sites/default/files/resources/Consultation-Principles.pdf

If you have any complaints about the consultation process (as opposed to comments about the issues which are the subject of the consultation) please address them to:

DECC Consultation Co-ordinator 3 Whitehall Place London SW1A 2AW

Email: consultation.coordinator@decc.gsi.gov.uk

# **Executive Summary**

- 1. The Renewable Heat Incentive (RHI) was launched in November 2011 with the objective of helping the UK achieve the targets set out under the Renewable Energy Directive. Initially only the non domestic scheme was launched, which supports renewable heating in the commercial, industrial, community infrastructure and district heating sectors by providing a payment for each kilowatt hour (kWh) of renewable heat generated.
- 2. The Government wants to support a broad range of renewable heating to encourage diversification of technologies, provide more choice for consumers and allow the renewable heat market to develop. This consultation seeks to expand the non domestic scheme by introducing more technologies and making other improvements to the support structure.
- 3. The Government is launching 3 consultations relating to the RHI: "Renewable Heat Incentive: proposals for a domestic scheme", detailing proposals of introducing RHI support for households; "Renewable Heat Incentive: expanding the non domestic scheme", detailing our plans for introducing support for new technologies and energy efficiency; and this consultation which details our proposals for Air to Water Heat Pumps and Energy from Waste. Both the other consultations are available on the DECC website and have a closing date of 7 December.<sup>1</sup>

#### Within the scope of this consultation

4. This consultation focuses on two technologies. The proposals for these technologies are being consulted on for a shorter, four-week, period because we do not expect to collect significant data in addition to what we have already, and the practical challenges in determining final policy are limited relative to other technologies. Therefore, we have greater certainty about them. Shortening the consultation does not necessarily infer that the proposals for AHWP or EfW will be brought in on a faster timetable than the proposals contained in the accompanying 11 week consultation "Renewable Heat Incentive: expanding the non domestic scheme".

#### Air to Water Heat Pumps (AWHP)

5. Air to water heat pumps were excluded from the start of the RHI as insufficient data on costs meant it was not possible to set an appropriate tariff level. We have subsequently gathered further evidence and we propose introducing support for AWHP. Our modelling estimates a tariff of 1.7p/kWh based, as with Air to Air Heat Pumps, on a single tier approach. We are also considering banding support for this technology by installation capacity.

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<sup>1</sup> www.decc.gov.uk/rhi

#### **Energy From Waste (EfW)**

6. EfW plants provide a cost effective source of renewable heat and there are limited wider environmental concerns owing to the strict planning and environmental rules and the sustainability of the feedstock. We therefore propose expanding RHI support to include a wider range of waste feedstocks, using the same eligibility criteria as the Renewables Obligation (RO).

#### Within the scope of the other non domestic consultation

7. Concurrent to this consultation we are running a 11 week consultation on further expanding the non domestic scheme. This other consultation includes proposals for a range of renewable technologies, summarised below, and non domestic energy efficiency requirements. If you have an interest or views regarding these proposals we encourage you to also respond to this consultation, noting the later deadline for response.

#### Air to Air Heat Pumps (AAHP)

- 8. There is an existing strong, growing market for reversible AAHP systems and we are therefore not proposing to introduce RHI support for these systems. Heating only AAHP on the other hand is still an emerging technology with an underdeveloped market. Therefore, there is the potential to introduce RHI support for heating only AAHP. If the evidence shows introducing support for this technology is appropriate, based on our modelling we estimate a tariff of 0.97p/kWh for all installation sizes is appropriate. This is based on a single tier "one size fits all" approach but we would also consider banding the tariff by installation size.
- 9. Unlike the other technologies currently supported by the RHI, there is no universally accepted standard for metering the output of AAHP. Ideally there would be a consistent approach for non domestic RHI payments, but the cost of implementing a metering system may be obstructively large. We are therefore considering an alternative approach of basing payments on an estimated heat load, also known as deeming.

#### **Biomass Direct Air Heating**

- 10. We propose to introduce support under the RHI for biomass direct air heaters and, maintaining a consistent approach with boiler technologies, propose to support only those heaters specifically designed and installed to use biomass only.
- 11. No universal standard exists for metering the flow and temperature of gas. We are considering three options for determining the RHI payment on biomass direct air heaters: meter the output; measure biomass input as a proxy for output; or use deeming to estimate heat load.
- 12. Based on our current evidence we are proposing a tariff of 2.1p/kWh. However, this is based on a single tier approach for all sizes of installation while the existing tariff for biomass boilers over 1MW is just 1p/kWh. Since biomass direct air heating is a more cost effective technology, the tariff level should reflect this and so we propose to reduce the tariff for direct air heaters over 1MW to 1p/kWh or less.

#### **Biogas Combustion Over 200kW**

- 13. Heat generation through biogas is currently supported under the RHI up to a thermal capacity of 200kW, which excludes a wide variety of potential users. The complexity of biogas technologies and the planning and investment required for an installation means that without support, many potential users will not make the switch to renewable heat.
- 14. We are minded to introduce two separate tariff bands above 200kW. A tariff for installations of 200-500kW, and a lower tariff for installations over 500kW. This would ensure compatibility with existing biogas support while reflecting the difference between uses of medium and large sized installations.

#### **Biomass and Bioliquid Combined Heat and Power**

- 15. Combined heat and power (CHP) technologies produce more total energy per unit of input than heat or electricity generation only. While CHP installations can receive RHI payments on their heat output, there is currently no tariff specific to CHP. We are proposing to introduce a specific tariff for heat from biomass CHP of 4.1p/kWh based on our current evidence.
- 16. Bioliquid technologies have not previously been supported under the RHI. Bioliquid CHP provides high levels of energy efficiency and greenhouse gas savings, hence we are proposing to introduce support for this technology. Our modelling for biomass CHP included bioliquids data and so the same tariff of 4.1p/kWh is proposed.
- 17. As we are proposing to provide specific support for CHP, those installations applying for support will be required to meet the Combined Heat and Power Quality Assurance (CHPQA) requirements to be consistent with the Cogeneration Directive and demonstrate good quality CHP.

#### **Deep Geothermal Heat**

18. Deep geothermal heat is currently supported in the RHI through access to the ground source heat pump (GSHP) tariff, which is based on GSHP data. In order to ensure the RHI can provide adequate support to this technology we are proposing a new tariff of 5.0p/kWh based on current evidence.

#### **Energy Efficiency**

- 19. Energy efficiency is at the heart of the Government's approach to tackling dangerous climate change and we want to determine what energy efficiency requirements are appropriate for the non domestic RHI. We are considering introducing energy efficiency requirements by splitting applicants into three categories: users of process heat; district heating; and commercial and industrial space and water heating.
- 20. For users of process heat there is already a significant economic driver towards energy efficiency, with heating forming a significant proportion of the business's cost. Furthermore, they are often already subject to energy efficiency requirements under schemes such as the EU Emissions Trading System and Climate Change Agreements.

We therefore propose that no additional requirements for energy efficiency are necessary in the RHI.

- 21. For district heating, economic factors alone may not be sufficient to compel heat users to introduce energy efficiency measures. We propose to align the approach for these users with the domestic RHI scheme, requiring applicants to install measures identified as "green ticks" under the Green Deal. It is necessary to allow some flexibility for district heating and so we propose that compliance with the measures should be required by only a majority of the premises on the network, the proportion of homes needing to comply being determined by a sliding scale based on the number of homes within the network.
- 22. For commercial and industrial space and water heating there is a highly heterogeneous range of users and a "one size fits all" approach is unlikely to be appropriate. While there is no universal standard for this type of heat use, there do exist various methods of demonstrating energy efficiency, such as Energy Performance Certificates, Display Energy Certificates and the Building Research Establishment Environmental Assessment Method. We therefore propose to allow applicants the choice of a range of alternative methods to demonstrate their energy efficiency.

#### **Other Minor Regulatory Changes**

23. We are also planning to make several minor regulatory changes to improve the operation of the scheme.

#### **Calls for Evidence**

24. In addition to this consultation and the other non domestic consultation we are launching a series on calls for evidence on landfill gas and biopropane technologies, and verifying our tariff setting assumptions for ground source heat pumps and large biomass. The details of these calls for evidence are contained in separate documents issued as part of this consultation.

# Introduction and Background

#### The Renewable Heat Incentive

- 25. Heat is the single biggest energy use in our society, we use more energy for heating than for transport or the generation of electricity. "The Future of Heating: A Strategic Framework for Low Carbon Heat", published in March 2012, sets out how we supply and use heat today and describes how the heat system will need to evolve over time. It identifies the substantial changes required across our economy and provides a strategic framework within which new policy proposals will be developed.
- 26. The Government's vision and strategy for decarbonising heat is set out within a three stage strategy, outlined for the whole economy in the Carbon Plan published in 2011. The first stage (until 2020) is about preparation for mass deployment in the 2020s and 30s (the 2<sup>nd</sup> stage).
- 27. The non domestic RHI was launched in November 2011 and introduced long-term tariff support for non domestic heat generation, targeted at the big heat users the industrial, business and public sectors. In addition to these sectors, the non domestic RHI also supports district heating, defined as heating installations which supply heat to more than one household.
- 28. Support was introduced in the form of tariffs payable for metered heat generated over 20 years. Some of the tariffs support more than one technology type, for example the biomass and biogas combustion tariffs also being applicable to combined heat and power (CHP) and the ground source heat pump tariff also being applicable to deep geothermal. Table 1 summarizes existing RHI support.

Tariff name	Eligible technology	Eligible sizes	Tier (if applicable)	Tariff level (p/kWh)
Small commercial	Solid biomass including solid	Less than 200 kW	Tier 1	8.3
biomass	biomass contained in		Tier 2	2.1
Medium commercial	municipal solid waste (incl.	200 kW and above; less	Tier 1	5.1
biomass	CHP)	than 1,000 kW	Tier 2	2.1
Large commercial biomass		1,000 kW and above		1.0
Small commercial heat pumps	Ground-source heat pumps; water source	Less than 100 kWth		4.7

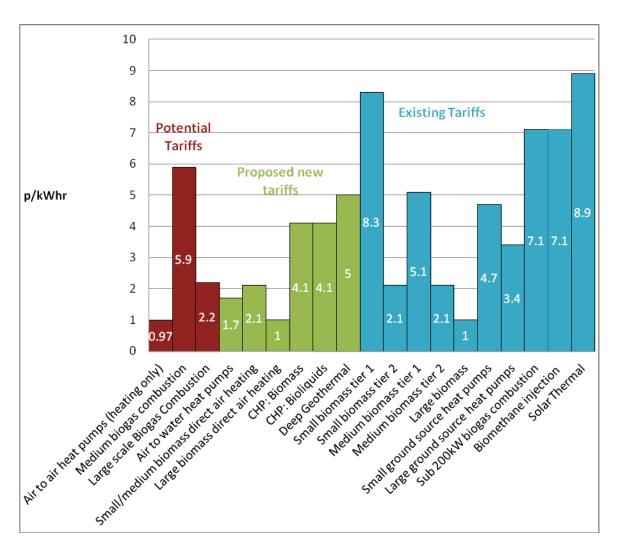
Large	heat pumps;	100 kWth and	3.4
commercial	deep	above	
heat pumps	geothermal		
All solar collectors	Solar collectors	Less than 200 kWth	8.9
Biomethane and biogas combustion	Biomethane injection and biogas combustion, except from landfill gas	Biomethane all scales, biogas combustion less than 200kW	7.1

Table 1: Existing support under the non domestic RHI

#### Support for new technologies

- 29. The main objective of the Renewable Heat Incentive is to help the UK achieve its 2020 renewable energy targets by bringing forward uptake of renewable heat. In general, renewable heat offers good value for money to the taxpayer in terms of the subsidy required per kilowatt hour (kWh) of renewable energy compared to other types of renewable energy, and forms a key part of the Government's plans for meeting the renewables targets.
- 30. The Renewable Energy Directive (RED) targets are deliberately set at a realistic but ambitious level, making the potential renewables contribution of a technology a key factor when prioritising which technologies to support. Costs also differ by technology and, given the scheme is funded by taxpayers, value for money is also an important consideration for each technology. Whilst it does not apply to any of the new technologies or changes proposed in this consultation, it is also important to note that Government caps support for renewable heat at the marginal cost of renewable energy. This is calculated as the cost of offshore wind (8.9p/kWh in 2012 prices paid over 20 years), because any payment for renewables above that value is more expensive that generating more renewable energy through offshore wind.
- 31. There may be a rationale for supporting renewables above the marginal cost in certain situations, for example we also need to consider the position post 2020 the Strategic Framework for Low Carbon Heat sets out longer term goals and these need to form part of our thinking, as do the Carbon Plan and the 4th carbon budget. If the RHI can help incentivise technologies which contribute to these objectives then the UK will be better placed in the long term. As well as helping meet the renewables target and reducing carbon, the RHI can also contribute to our security of supply and other goals such as Defra's waste strategy.
- 32. In general, Government wants to support as many forms of Renewable Heat as possible providing they offer good value for money; diversification of technologies leads to more choice for consumers, better competition and greater security of supply. New renewable

- technologies and improvements on existing technologies emerge at a surprising rate and the intention is that the RHI will be regularly updated to reflect these changes.
- 33. In the two non domestic consultations launched in September 2012 we are proposing significant changes to three currently supported technologies and considering introducing additional support for four new technologies. We are also concurrently issuing 'calls for evidence' on a further four technologies. Our modelling indicates the total additional renewable contribution of the proposed changes is 10.8TWh, although this figure excludes the contribution of the technologies on which there is the most uncertainty.
- 34. The technologies on which we are consulting or seeking evidence on can be divided into four main categories:
  - Those for which we have previously announced our intention to introduce support through the RHI but we were unable to include in the initial tranche of the RHI in November 2011. The reasons for this varied significantly, from metering problems to fundamental consideration of the suitability for subsidy;
  - Technologies which were not included in the original RHI proposals but for which there
    is now a case for inclusion;
  - Technologies which, while currently eligible for the RHI under an existing tariff, have
    not had specific tariff levels set to reflect their particular costs and performance. We
    are proposing introducing new tariff levels for those technologies, taking into account
    their particular characteristics, to provide genuine incentives; and
  - Technologies for which we do not yet have enough evidence to make any proposals for introducing or adjusting support. For these technologies we are issuing a call for evidence.
- 35. Graph 1 illustrates the different tariffs, split into existing support, firm proposals for new support and support we are considering but where the tariff proposals are less certain. Please note that all tariffs are shown at 2012 levels.



Graph 1: Existing and proposed tariffs in 2012 prices

#### **Tariff setting methodology**

- 36. Tariffs for both the non-domestic and domestic RHI schemes are calculated in the following way:
  - Estimate the additional cost of installing and running a renewable heating system compared to fossil fuel heating. This is used to calculate the cost per unit of heat produced for renewable technologies less the cost of the conventional technology alternative. Added to this cost are the additional barrier costs. Calculations are made using costs, use and performance data for each technology in each category of building (broken down by commercial, industrial, counterfactual fuel and location).
  - Estimate the heat demand of each building category, the number of such buildings and the proportion of them suitable for each renewable technology.
  - From these figures, a "supply curve" is produced for each technology which estimates the amount of renewable heat potential each tariff level.
  - From these curves we are able to identify the tariff required to incentivise the targeted percentage of the potential installations. This targeted percentage is the 50% point on

- the supply curve (**unless** the tariff reaches the level consistent with the marginal cost of meeting the renewables target, as described in paragraph 6)<sup>2</sup>.
- 37. The tariffs levels, all set using this methodology, vary by technology and size because of the different costs different technologies have different costs and larger installations tend to produce heat at a lower cost per unit. However, while certain technologies cost more per kilowatt (kWh) of heat produced, a range of technologies are supported because: (a) there is likely to be greater potential for cost reductions in the more expensive (and generally less mature) technologies and (b) all the above technologies are expected to be important sources of supply to meet future heat demand post 2020.

#### **Budget Management**

- 38. It is essential that the RHI is financially sustainable and that deployment of renewable heat continues to be good value for money to the taxpayer. We need fast growth in renewable heat but we must ensure the RHI provides the support for that growth to be steady. Peaks and troughs in uptake are inefficient and harm supply chains; exceeding our annual budgets would create such peaks and troughs.
- 39. During the summer we consulted on proposals for a long term budget management mechanism for the non domestic RHI based on flexible degression of tariffs. This means that as deployment approaches pre-determined triggers, tariffs are decreased by a set amount for new applicants to the scheme. The triggers for each technology, and for the RHI overall, would be based on the level of deployment required to keep us on a trajectory to deliver the 2020 renewables target. Degression responding to deployment levels will help ensure value for money whilst maintaining the growth required. It will also provide for continuity in the scheme by controlling budgets and removing the need for sudden or unexpected policy changes or suspensions.
- 40. We are considering the responses to that consultation however, assuming no significant reasons against this proposed policy have emerged in response to the consultation, we propose a similar mechanism for the additional non-domestic technologies now under consideration. Triggers for tariff reductions will be set out in advance and progress towards those triggers will be monitored and made available monthly on the DECC website. The size of possible reductions would also be set out in advance, with a small reduction if deployment is slightly above that needed, and a larger reduction if deployment is significantly higher than that needed for the 2020 renewables targets. As with those technologies already in the non domestic RHI, these technologies would also be covered by the tariff reviews scheduled for 2014 and 2017.
- 41. Should the decision be made to go ahead with these technologies, the trigger levels and degression amounts will be set out in the Government Response to this consultation, planned for publication in spring 2013.

17

<sup>&</sup>lt;sup>2</sup> RHI tariffs are capped at 8.9p per kilowatt hour (2012 prices for offshore wind).

# Proposals for new support

#### Air to Water Heat Pumps (AWHP)

#### **Description of Technology**

- 42. Air to water heat pumps (AWHP) extract heat from the outside air and produce hot water. They can be used as replacement systems for existing commercial oil (or gas) boilers. Heat pumps work most efficiently when heating water to a lower temperature than may be expected from a typical boiler, hence they are normally coupled with heating systems that require relatively low operating temperatures, such as under-floor heating. There are systems available that can integrate with conventional radiator systems, although the radiator size may need to be increased.
- 43. This form of heat pump was originally excluded from the RHI due to insufficient data on the associated costs and consequent inability to set an accurate tariff. This issue has been addressed and we are in a position to introduce support for this form of heating.

#### **Proposed support**

44. Our current modelling suggests that the tariff required to incentivise 50% of the available potential for air to water heat pumps would be 1.7p/kWh. This tariff, like the air to air heat pump tariff, is currently based on a single banding – AWHP of all sizes would receive this tariff. Again, we would like evidence on whether there may be benefits to introducing size banding for this technology. If this were to be done, it is likely to reduce the tariff for larger AWHP and increase it for smaller installations.

Consultation Question		
1	Do you agree that air to water heat pumps should be included in the Renewable Heat Incentive?	
2	Do you think that, were we to use a 'one size fits all' approach, a tariff of 1.7p/kWh would be appropriate for this technology?	
3	Should support for air to water heat pumps be banded by size?	
4	Can you provide any views or evidence on the installation capacity limit at which different tariffs should apply under banded support?	

# Seasonal performance factor requirements for heat pumps (Air and Ground source)

- 45. The ratio of the heating output of a heat pump over the amount of electricity it uses gives the coefficient of performance (COP) of the heat pump. The seasonal performance factor (SPF), is the average COP for a heat pump over a whole year and reflects the efficiency a heat pump achieves when installed. A higher SPF means a more efficient heat pump system which will deliver more renewable heat for every unit of electricity used, also making it cheaper to run and delivering greater carbon savings.
- 46. The Renewable Energy Directive (Annex VII) sets out the equation for calculating how much of the energy generated by heat pumps should be considered renewable and a minimum SPF is part of that equation. The SPF is dependent on pan-EU average electricity generation efficiency. Heat pumps which do not meet the minimum SPF are not counted as renewable under the Directive. The latest available data, when entered into this equation, gives a minimum SPF of 2.5. The RHI has a current requirement for heat pumps to meet a minimum COP of 2.9.
- 47. We would expect heat pumps which are designed, installed and used appropriately to meet an SPF requirement of 2.5 but we would like to see better and improving performance over time. However, the European Commission has committed to produce guidance by 1 January 2013 on how to calculate SPF for different heat pump technologies and applications, taking into account differences in climate conditions. Therefore, we intend to review that final guidance to inform our decision as to whether and how our efficiency requirements for heat pumps should be revised.
- 48. For example, one option, were we to make a minimum SPF a condition of the RHI, would be to require proof of that minimum SPF level via the newly revised MIS3005 version 3.1a or later, including for those heat pump systems that are over the 45kW Microgeneration Certification Scheme (MCS) limit. The European Commission guidance is due to be published prior to the finalisation of this policy so we will be able to clarify the position in the Government response.

Consultation Question		
5	Do you agree that any changes to the heat pump efficiency requirements should be based on the European Commission guidance?	
6	Were a minimum SPF required, how do you suggest that it should be demonstrated as part of the RHI application process?	

# Changes in support

#### **Energy from Waste**

#### **Description of Technology**

- 49. The incineration of energy from waste (EfW) is currently supported in RHI under the biomass tariff. The RHI pays a tariff for the proportion of heat generated from the biomass in municipal solid waste (MSW), which is typically 50% or higher. Currently, other types of waste, such as commercial and industrial waste are excluded. However, other types of waste are supported under the Renewables Obligation (RO).
- 50. Energy from waste has the dual benefit of producing renewable energy and avoiding harmful methane emissions when the biodegradable proportion of this waste decays in landfill. The main input fuels for incineration are currently waste collected by local authorities (typically referred to as Municipal Solid Waste (MSW)), commercial and industrial waste, and in some cases construction and demolition waste.
- 51. MSW being the only waste stream eligible under the RHI provides a significant barrier to companies wanting to build EfW plants. Waste contracts will often include other types of waste and it is rarely viable to run a plant purely on MSW. Furthermore, the RO supports the incineration of other wastes so there is merit in being consistent, given that EfW businesses will often deal with both incentives.
- 52. EfW is a cost effective renewable resource although project lead times are very long and there is a high level of uncertainty about the likely deployment to 2020. The feedstock does not face any issues of sustainability and strict planning and environmental permitting rules already apply.
- 53. We propose expanding the types of renewable wastes eligible under the RHI, to be consistent with the RO, and continue to pay the biomass tariff for the biomass proportion of the waste. This will extend RHI support to commercial and industrial waste. "Waste" means any substance which the producer or holder discards or intends to discard. This includes waste where pre-processing, mixing or other operations have been carried out, resulting in a change in the nature or composition of the waste. "Renewable" waste is where not more than 90% is waste which is, or is derived from, fossil fuel. This does not include gas derived from landfill sites as this are not currently eligible for support under the RHI.
- 54. The costs of generating heat using this fuel type, including CHP, are significantly lower than biomass or bioliquid CHP and we propose that the existing biomass tariffs will continue to apply to energy from waste CHP.

Consultation Question		
7	Do you agree that we should expand the RHI to support a wider range of waste feedstocks?	
8	Do you agree that the RHI should take a consistent approach to the RO and adopt the same waste eligibility criteria?	

# Calls for Evidence and other technologies

55. In addition to the two non domestic consultations we will be launching a series of 'calls for evidence' relating to different technologies. Please note that these calls for evidence and being issued as separate documents and are being run to different timescales with different deadlines for response.

#### Call for Evidence- Landfill gas

56. Landfill gas is a declining resource and has not previously been considered as an RHI supported technology. We are launching a call for evidence asking for more information on this technology.

#### Call for Evidence- Ground source heat pumps

57. The existing tariff for ground source heat pumps has not brought forward the number of installations of this technology we expected. Discussions with the industry have indicated that this may be due to inaccuracies in our assumptions about the costs, efficiencies and load factors of installations. We are issuing a call for evidence to verify our current assumptions.

#### **Call for Evidence- Biopropane**

58. A relatively recent proposal from the industry involves importation of biopropane for use in the UK. Initial research suggests this would present good value for money in terms of renewable targets – associated tariff likely to be low – but importing this gas would not promote green growth and UK heat self sufficiency to the same degree as other renewable technologies. This is unlike any other technology supported under the RHI and we do not have sufficient data to make any decisions. In order to obtain more information we plan to launch a call for evidence on this technology.

#### Call for Evidence- Large biomass tariff (>1MW)

59. A European Commission state aid decision resulted in the RHI large biomass tariff being reduced from 2.7p/kWh to 1p/kWh. Subsequent projections of fossil fuel costs suggests that this should be sufficient to incentivise significant large scale biomass. However,

market evidence suggests that very few projects are going ahead under the current tariff with a much greater proportion than 50% being cancelled following the change to the tariff. Therefore, we intend to use this call for evidence to verify our assumptions.

# Next Steps

- 60. Following this consultation, our proposals will be finalised and a Government response issued, after which we will undergo the necessary regulatory processes, both domestic and European, with the aim of introducing new support by summer 2013.
- 61. Parts of the proposals outlined in this consultation will require European State Aid Clearance. Whilst we do not expect any delays as a result of these European requirements, they are nonetheless possible.
- 62. The Renewable Heat Incentive is being reviewed in 2014 with the aim of introducing the outcome of the review in 2015.

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