DEPARTMENT OF ENERGY & CLIMATE CHANGE

Renewable Heat Incentive

Call for evidence: Landfill Gas

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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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General information

Purpose of this call for evidence

This is a call for evidence for information on landfill gas, a declining resource that has not previously been considered for inclusion in the RHI.

Issued: 20 September 2012

Respond by: 2 November 2012

Enquiries to:
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Call for Evidence Reference: **URN:12D/356** – Landfill Gas

Territorial extent:
This consultation applies to England, Scotland and Wales.

How to respond:

The closing date for responses is: 2 November 2012

Please send responses by email to: rhi@decc.gsi.gov.uk. 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.

Introduction

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. The scheme supports renewable heating in commercial buildings, industry, community infrastructure and district heating by providing a payment in the form of a tariff for each kilowatt hour (kWh) of renewable heat generated. Three consultations are being launched in parallel to this call for evidence: "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 "Renewable Heat Incentive: Air to Water Heat Pumps & Energy from Waste", detailing our proposals for Air to Water Heat Pumps and Energy from Waste. These consultations are all available on the DECC website and have a closing date of 7 December[1]

In addition to these consultations we will be launching a series of 'calls for evidence' relating to different technologies. Please note that these calls for evidence are being issued as separate documents and are being run to different timescales with different deadlines for response. This call for evidence relates to large biomass over 1MW and is open for 4 weeks, with a deadline of 18 October. Details of the other calls for evidence are available at the end of this document.

Landfill Gas

Landfill gas is generated from biodegradable waste in landfill and can be captured and utilised for the generation of electricity or heat. The gas can be combusted to generate heat, either directly or from capturing heat from electricity generation, or alternatively biomethane can be extracted and injected into the gas grid.

Landfill gas is not currently eligible for support under the RHI. Our evidence shows that the existing tariff for biogas combustion and biomethane injection into the grid would over compensate landfill gas, since the relative costs are significantly lower and we lack sufficient data to establish whether or not a separate landfill gas tariff would be appropriate.

While many sites are subject to the Landfill Directive and are under a legal obligation to capture and where possible utilise landfill gas, there remain a considerable number of sites that were closed prior to the Landfill Directive in 2001 and so are not subject to these requirements. Landfill gas therefore offers a potentially substantial untapped resource for renewable heat in the short term and the utilisation of the gas will help reduce greenhouse gas emissions from landfill sites.

The RHI however provides long term support to provide certainty to industry, and is intended to make a contribution to long term energy targets and the diversification of the sources of heat. Landfill gas is a declining resource as biodegradable waste is increasingly being diverted from landfill and this resource is expected to decline further in the future. Support introduced from the

[1] www.decc.gov.uk/rhi

RHI would therefore be unable to facilitate the long term development of a renewable heat market.

Consultation Question	
1.	Can you provide any evidence to support the inclusion or otherwise of landfill gas in the RHI?

Many commercial operations have been developed for electricity generation from landfill gas, this is considered a financially viable option without government support. It is possible to convert electricity generating plants to combined heat and power (CHP) plants, however this is often considered impractical due to additional costs and the lack of opportunities for heat use at many landfill sites. Furthermore, the conversion of an electricity generating landfill gas plant to a CHP plant results in lower electricity production.

Consultation Question	
2.	Can you provide any evidence as to the benefits of converting electricity generating landfill sites to CHP producers?
3.	Can you provide any evidence as to whether RHI support could cost effectively encourage the conversion of electricity generating landfill sites to CHP?

There is a further opportunity of heat generation from landfill sites by capturing heat from flaring landfill gas. The main hurdle to this heat being utilised is the lack of infrastructure and distribution networks, the financial barrier is not the cost of producing the heat but the cost of transferring the heat to users. RHI support is designed to account for the difference in cost between the renewable source and fossil fuel alternative and since the cost of producing the heat is already financially viable, introducing an RHI tariff for this form of heat may not be appropriate.

Consultation Question	
4.	Can you provide any evidence of the costs of producing heat from flaring landfill gas and how an RHI tariff would help this form of heat compete with fossil fuel alternatives?
5.	Can you provide any evidence of the impact on air quality of this form of heat production?

Another possible use of landfill gas is to extract biomethane for injection into the gas grid. The cost of converting electricity generating sites to biomethane injection sites is significant and it is unlikely many producers would consider such investment. However, at those sites where electricity production is not feasible, the development of a biomethane injection plant could be a viable option.

Landfill gas is less methane rich than the biogas produced via anaerobic digestion or advanced conversion technologies and so the clean up process may be more difficult and costly. We do not have sufficient evidence about the costs and potential for biomethane from landfill gas to determine whether and what level of support may be suitable.

Consultation Question	
6.	Can you provide any evidence of the costs of producing biomethane for injection into the grid from landfill gas? Please also provide evidence about the technical and economic potential of such sites.

Other calls for evidence

Call for Evidence- Ground Source Heat Pumps

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, performance and load factors of installations. We are issuing a call for evidence to verify our current assumptions.

Call for Evidence- Biopropane

A relatively recent proposal from the industry involves importing biopropane for use in the UK. Initial research suggests this would present good value for money in terms of renewables targets but importing this gas would not promote green growth and UK heat self sufficiency to the same degree as other renewable technologies and fuels. Currently, we do not have sufficient data to make firm proposals about the inclusion of biopropane. In order to obtain more information we are publishing a call for evidence on this fuel.

Call for Evidence- Large biomass (>1MW)

We have had a significant number of RHI applications under the large biomass tariff. However, anecdotal 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 last year. Therefore, we intend to use this call for evidence to verify our assumptions about the costs and performance of large biomass boilers.

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