

# Renewable Heat Incentive

**Call for evidence: Ground Source Heat Pumps**

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The consultation and Impact Assessment can be found on DECC's website:  
[http://www.decc.gov.uk/en/content/cms/consultations/rhi\\_cert\\_perf/rhi\\_cert\\_perf.aspx](http://www.decc.gov.uk/en/content/cms/consultations/rhi_cert_perf/rhi_cert_perf.aspx)

Published by the Department of Energy and Climate Change

# General information

## Purpose of this call for evidence

This is a call for evidence for data on ground source heat pumps in order that we can review and test the assumptions used to set support levels for this technology in the Renewable Heat Incentive.

**Issued:** 20 September 2012

**Respond by:** 18 October 2012

## Enquiries to:

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Call for Evidence Reference: **URN:12D/355** – Ground Source Heat Pump

## 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/decc-policy/rhi-performance/consult\\_view](https://econsultation.decc.gov.uk/decc-policy/rhi-performance/consult_view)

If you are unable to submit your response online please send it in an email to: [rhi@decc.gsi.gov.uk](mailto: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](http://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 [www.decc.gov.uk/en/content/cms/consultations/](http://www.decc.gov.uk/en/content/cms/consultations/). 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](mailto:consultation.coordinator@decc.gsi.gov.uk)

## 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 11 December.<sup>1</sup>

In addition to this consultation 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 the assumptions we make about the costs, efficiencies and load factors of Ground Source Heat Pump (GSHP) installations and is open for 4 weeks, with a deadline of 19 October. Details of the other calls for evidence are available at the end of this document.

## Ground Source Heat Pumps

Ground source heat pumps pass fluid through coils in the ground to extract heat and return it to the surface. Ground source heat pumps make use of the ground as a store of the sun’s heat, which makes them less susceptible to daily weather changes.

Earlier this year DECC published the Strategic Framework for low carbon heat in the UK<sup>2</sup>, detailing how we will reduce emissions from buildings to nearly zero by 2050. As the framework sets out, GSHP have a key role to play in achieving national targets for low carbon heating.

The RHI is currently the main mechanism for supporting GSHP in the UK. As we have not seen the level of uptake of GSHP that was anticipated, we are issuing this call for evidence to verify our assumptions on this technology.

### Question

Can you provide us with data on GSHP projects which have not gone ahead, specifying, where possible, why the projects were cancelled?

<sup>1</sup> [www.decc.gov.uk/rhi](http://www.decc.gov.uk/rhi)

<sup>2</sup> <http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/heat/4805-future-heating-strategic-framework.pdf>

## Assumptions – key variables

The key variables used to model GSHP uptake are contained in the table below with a brief description of the data which was used by AEA, the consultants working on the project.

Main Assumptions	Current Evidence Source
Capital costs	Data supplied by UK GSHP industry
Operating costs	Average of opinions from installers and AEA estimates
Efficiency	Average values from published data from manufacturers, Steibel Eltron, Veissman and US case study on IGSHPA website
Load Factor	AEA estimate based on sector usage
Lifetime	AEA estimates and manufacturers literature.
Typical Sizes	AEA estimates from sector information.
Applicability	AEA estimates
Impact on counterfactual	AEA based on published prices for similar systems.

### Question

Please provide data, in the format of the table above where possible, on the main assumptions. In particular where you disagree with current assumptions and evidence base, please provide specific supporting examples. When providing data on the counterfactual, please provide data on all systems replaced, i.e. if the GSHP is replacing a cooling system in addition to a heating system.

During the period of this call for evidence we have also commissioned a review of cost and performance assumptions for RHI-supported technologies. This call for evidence and the work we have commissioned to be carried out are designed to be complementary. Therefore, you do not have to supply information through both sources though please use this call for evidence if you are not contacted by our consultants or if you would like to provide supplementary information.

### Other calls for evidence

#### Call for Evidence- Landfill gas

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- Biopropane**

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)**

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.

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URN 12D/355