

[DOMESTIC]

GROUND & AIR
SOURCE HEAT PUMPS

RENEWABLE HEAT INCENTIVE SCHEME

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OVERVIEW

INTRODUCTION



The domestic RHI is a financial support scheme for renewable heat, targeted at, but not limited to, off gas grid households. The support will be paid at a set rate per unit of renewable heat produced (kilowatt hour or kWh), for seven years, to the owner of the heating system. The scheme will support air source heat pumps (ASHP), biomass systems, ground source heat pumps (GSHP) and solar thermal technologies.

The support rates vary depending on the technology installed:

	ASHP	GSHP	Biomass	Solar Thermal
Tariff p/kWh renewable heat	7.3	18.8	12.2	19.2

All installations must be certified under the Microgeneration Certification Scheme and meet relevant required standards for each technology, including limits on harmful emissions for biomass systems.

The scheme will cover single domestic dwellings and will be open to owner-occupiers, private landlords, registered providers of social housing, third party owners of heating systems and self-builders. It will not be open to new build properties other than self-build.

In addition, the scheme will be open to anyone in these groups who installed an eligible technology since 15th July 2009 (called legacy applicants), provided they meet the criteria.

The renewable heat generated will be estimated in most cases for payment purposes. For biomass and heat pumps, it will be based on an estimated figure of heat demand from an Energy Performance Certificate.

For heat pumps, this will be combined with an estimate of the heat pump's efficiency to determine the renewable proportion of the heat. Those applying for a space heating system who have a back up heating system, such as an oil boiler, or people applying for a second home, will need to install metering equipment on which the RHI payments can be based.



Before applying for RHI support, all applicants, including legacy applicants, will need to ensure that:

1. **Green Deal Assessment (GDA) has been carried out to find out which energy efficiency measures are cost-effective for the property;**
2. **loft insulation (to 250mm) and cavity wall insulation have been installed where these measures are recommended by the GDA;**
3. **and where the GDA shows the required loft and cavity wall insulation is yet to be installed, an updated Energy Performance Certificate (EPC) is obtained following installation, as proof of installation (or valid evidence is provided proving why installation was not feasible).**

The only exception is for self-builders, whose properties will already be energy efficient since they are built to current building regulation standards. However, they will need an EPC in order for Ofgem to be able to calculate their payments.

CALCULATION OF PAYMENTS

WORKING OUT THE TARIFFS



The RHI support will be paid on each kWh of renewable heat the installation generates, for seven years. To work out how much heat is generated, DECC will be using a 'deeming' calculation that estimates the property's expected annual heat usage. Multiplying the deemed figure by the technology's tariff rate will determine the annual payments.

The deeming calculation for biomass and heat pumps will be the estimated heat use (in kWh) of a property after the installation of the required energy efficiency measures. Where an applicant already has these installed, the figure will be taken from the Energy Performance Certificate (EPC) done as part of the Green Deal Assessment. Where the Assessment identifies that the measures still need to be put in place, the figure will be taken from the updated EPC completed after their installation.

Participants will receive RHI payments quarterly in arrears for seven years. Tariffs will change annually in line with the Retail Price Index (RPI). Increases or decreases will take effect in the first payment period following 1 April each year, in line with RPI changes in the prior financial year (1st April – 31st March).

Not all of the heat generated by heat pumps that run on electricity is renewable. RHI payments for heat pumps will only be made on the renewable portion of their heat output. This is the energy that comes from the ground, water or air, net of the electricity used to run.

The amount of renewable heat generated by a heat pump depends on its efficiency – that is, how much electricity it uses to operate per unit of heat it generates.

The technical term for heat pump efficiency averaged over a whole year is Seasonal Performance Factor (SPF) which is normally between around 2.5 and 4. The SPF relates to how much heat the system generates per unit of electricity it uses – for example, a heat pump with an SPF of 3 generates 3 kWhs of heat for every 1 kWh of electricity it uses.



The eligible heat for the purposes of RHI payment will be worked out using the following formula:



$$\text{ELIGIBLE HEAT DEMAND} = \text{TOTAL HEAT DEMAND} \times (1 - 1/\text{SPF})$$

This means that if the heat pump has an SPF of 3, two-thirds of the heat output will be renewable and therefore eligible for RHI payments.

For heat pumps installed after the scheme launches, the performance of the system will need to be estimated by an MCS installer. The rating will be recorded by the installer and given to the owner of the system as part of the installation process. It will be based on the star rating system in a document called the Heat Emitter Guide, designed to be used when installing heat pump systems through MCS.

Heat pumps installed before the launch of the scheme will be given a default SPF of 2.5. Applicants can arrange a full assessment by an MCS installer to demonstrate a higher rating if they wish.

If the applicant has previously received public funding for the heating system, such as the Renewable Heat Premium Payment, this must be declared as part of the application process. This will then be deducted from RHI payments under the scheme. Initially, a deduction equal to one twenty-eighth of the value of the prior public funding received will be made from each quarterly payment.

However, where tariffs are altered in line with RPI, the quarterly deduction will also change by the same proportion, so that the overall value of the deduction remains constant.

DECC also intend to take into account other forms of subsidy – for example, support from energy companies. In some cases, where subsidy has been provided in the past, RHI payments may be reduced or these installations may be ineligible. This is aimed at ensuring applicants do not receive a double subsidy to install renewable heat. Details will be confirmed closer to the launch of the scheme.

For biomass and heat pumps, payments will be based on metered renewable heat usage rather than deemed usage in two situations:

- 1. If the renewable heating system is installed alongside another fossil fuel or renewable space heating system (this includes hybrid systems)**
- 2. For second homes; to minimise the burden on applicants, DECC are working with MCS to make it an MCS Installation Standard requirement that all new systems installed in the domestic RHI are ‘meter-ready’ where possible. This will not apply to legacy installations. Making an installation ‘meter-ready’ will include:**
 - Leaving sufficient space for heat meters to be fitted in defined locations
 - Installing isolation valves to avoid the need to drain systems when fitting heat meters
 - Leaving the pipework accessible (i.e. not boxed in) to enable meters to be fitted
 - Providing information about the installation (this will help DECC to select appropriate sites for RHI metering)

DECC will offer householders installing heat pumps an optional additional payment of £230 per year for purchasing a Metering and Monitoring Service Package from their installer that meets our requirements.

These packages are similar to a service contract. An installer will fit an advanced set of meters to the new heating system so that the householder and installer will be able to view measured data from their system over the internet.

FACTS AT A GLANCE

USEFUL INFO



Payments will be made quarterly for Renewable Heat produced for seven years.

	ASHP	GSHP	Biomass	Solar Thermal
Tariff p/kWh renewable heat	7.3	18.8	12.2	19.2

Owner Occupiers, Private Landlords, Registered providers of Social Housing, third party owners of heating systems and self builders are eligible.

Systems installed since July 15th 2009 can apply.

Green Deal Assessment is required.

Installations need to be MCS approved.

Payments will be based on a deemed output, based on an EPC and the system efficiency (as calculated by the MCS installation company).

A SPF value of 2.5 (to calculate the efficiency) will be used for existing systems.

RHPP or other public funds previously claimed will be deducted from the RHI payments over 7 years.



HOW TO PROCEED?

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