



Renewable Heat Incentive

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Guidance on Renewable Heat Incentive

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1. Purpose of the scheme

Renewable heat is an alternative form of heating generated from sources that releases much less CO₂ into the atmosphere. To encourage more people to heat their own homes and their water the Government has created the Renewable Heat Incentive (RHI), a financial incentive to promote the use of renewable heat and get people to switch their systems over.

1.1. Description of the scheme

This document is for the domestic RHI only, launched 9 April 2014, and for consumers primarily who are looking to install a renewable heat technology. The Renewable Heat Incentive for domestic properties is to be run alongside the Green Deal. Before taking part you will be required to undergo a Green Deal Assessment and get an Energy Performance Certificate (some exceptions to this for landlords can be found on Ofgem's website). There may be a requirement for you to have loft and cavity wall insulation installed also.

The RHI payments are based on the heat demand of the property and payments are received for 7 years.

The aim of the Scheme is to make sure the consumer is able to pay off the cost of installing the system by the payments. Anybody that wishes to invest in buying and installing eligible technologies should be able to be confident that the cost of their investment will be recovered.

Consumers can expect to continue to benefit from the reduced energy bills after the RHI payments have finished. The RHI is for buildings on and off the gas grid but if you are on the gas grid then you would be expected to save more on bills.

1.2. Length of the scheme

The RHI will last for 7 years for all eligible renewable technologies and payments will be received quarterly for the quarter that has just passed.

The lifespan of the equipment is due to be longer than 7 years giving you a reduction on your energy bills after the RHI payments cease. Savings on bills are expected to continue for 20 years after installation.

1.3. Eligible technologies and tariffs

The table below shows the main technologies that are eligible for the domestic RHI.

Technology	Tariff for the domestic RHI, per unit of energy, 1st Oct – 31st Dec 2015
Biomass (biomass only boilers and biomass pellet stoves with back boilers.)	6.43p
Solar Thermal (Flat plate and evacuated tubes)	19.51p

Air Source Heat Pumps (air to water only)	7.42p
Ground Source Heat Pumps (air to water only)	19.10p

The full list of eligible technologies is available to see on the Ofgem website and is known as the PEL. You should check here first if you have any doubts over the eligibility of your system.

<https://www.ofgem.gov.uk/publications-and-updates/domestic-renewable-heat-incentive-product-eligibility-list-pel>

There are some variations on requirements for the different technologies and how payment will work. See below for further guidance.

2. The technologies

2.1 The technologies

2.1.1 Biomass

Biomass boilers and stoves use the energy from burning wood to heat your home. Wood fuel normally comes in the form of pellets or logs, and biomass can be used for both space and water heating. RHI payments are based on the heat demand figure on the property's EPC for biomass boilers and these systems might require metering.

Further guidance on Biomass Boilers can be found at these links:

<http://www.energysavingtrust.org.uk/domestic/biomass>

<http://www.which.co.uk/energy/creating-an-energy-saving-home/guides/wood-burning-stoves/wood-heating-systems/>

Things to watch out for:

- Fuel must be solid biomass only and the burner should not be used to cook food.
- Biomass Boilers need to meet with air quality requirements. As proof of having this, the product must have an emissions certificate issued by an appropriate laboratory. To check whether a boiler has an emissions certificate you can check the PEL or HETAS's list.
- As of 5 October 2015 where fuel is sourced and supplied from must meet sustainability requirements. A Biomass Suppliers List (BSL) has been produced and is available [here](#). Suppliers on this list should meet the standards required which can be found [here](#).
- All participants are strongly encouraged to start sourcing from a BSL supplier in advance of the criteria coming into force.
- The biomass system must be designed to heat the whole property otherwise it will need to be metered. More on metering can be found below.

2.1.2 Solar Thermal

Solar Thermal systems (solar hot water) use the energy from the sun to heat the water in your property. The hot water is then stored in a cylinder in your home until you are ready to use it. Solar thermal systems heat water only; they cannot be used for space heating. RHI payments are different to the other technologies.

Payments are based on the 'estimated annual generation' figure on the system's MCS certificate and solar thermal systems do not require metering.

Further guidance Solar Hot Water systems can be found at these links:

<http://www.energysavingtrust.org.uk/domestic/solar-water-heating>

<http://www.which.co.uk/energy/creating-an-energy-saving-home/guides/how-to-buy-solar-panels/solar-water-heating-prices-and-savings/>

Things to watch for:

- RHI payments for solar thermal will use the declared net capacity figure from your MCS Certificate. Solar thermal systems should heat your water only. Those that are part of a system that also provides heat for a purpose other than domestic hot water are not eligible for the scheme. This includes space heating (for example through a thermal store).
- These systems must be used for the heating of a property i.e. not a swimming pool.
- It is possible to have solar thermal installed to heat your water and a heat pump or biomass system installed to heat your space.

2.1.3 Air Source Heat Pumps

Air Source Heat Pumps take the heat from the air outside into the property making it warmer as it does so. This warm air is then pumped around your home to heat it. Air source heat pumps can be used for both space and water heating. RHI payments are based on the heat demand figure on the property's Energy Performance Certificate (EPC) for ASHPs and these systems might require metering.

Further guidance on Air Source Heat Pumps can be found at these links:

<http://www.energysavingtrust.org.uk/domestic/air-source-heat-pumps>

<http://www.which.co.uk/energy/creating-an-energy-saving-home/guides/air-source-heat-pumps-explained/>

http://www.icax.co.uk/Air_Source_Heat_Pumps.html

Things to watch for:

- All heat pumps use electricity to run. The installer should factor in the pumps efficiency known as the 'Seasonal Performance Factor' (SPF) when calculating your RHI payments. This is also used by the installer when making sure the heat pump is suitable for the property.
- Air source heat pumps with high temperature flows are now eligible for the RHI as long as they have a Seasonable Performance Factor of 2.5 or more.
- The Ecodesign of Energy-related Products Directive (ErP) and the Energy Labelling Directive came into force on 26 September 2015, introducing a product label and a package label. This allows consumers and installers to identify the best performing heat pumps. This change has implications for how the SPF is calculated, and after 25 March 2016 all systems must use equipment that is ErP compliant.
- Do pay attention to readings and contact your installer if you feel that bills are increasing. A small fault in the installation can result in energy usage climbing.

- Heat pump systems that combine a heat pump with a fossil fuel system such as a gas boiler within the same product will require metering.
- The system must be air to water heating, air to air is not eligible.

2.1.4 Ground Source Heat Pumps

Ground Source Heat Pumps take the heat from the ground outside and brings this into the property making it warmer as it does so. This heat is pumped around your home. Ground source heat pumps can be used for both space and water heating. RHI payments are based on the heat demand figure on the property's EPC for GSHPs and these systems might require metering.

Further guidance on Ground Source Heat Pumps can be found at these links:

<http://www.energysavingtrust.org.uk/domestic/ground-source-heat-pumps>

<http://www.which.co.uk/energy/creating-an-energy-saving-home/guides/ground-source-heat-pumps-explained/>

http://www.icax.co.uk/Disadvantages_Ground_Source_Heat_Pumps.html

Things to watch for:

- All heat pumps use electricity to run. The installer should factor in the pumps efficiency known as the 'Seasonal Performance Factor' (SPF) when calculating your RHI payments. This is also used by the installer when making sure the heat pump is suitable for the property.
- Ground source heat pumps with high temperature flows are now eligible for the RHI as long as they have a Seasonable Performance Factor of 2.5 or more.
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- Do pay attention to readings and contact your installer if you feel that bills are increasing. A small fault in the installation can result in energy usage climbing.
- Heat pump systems that combine a heat pump with a fossil fuel system such as a gas boiler within the same product will require metering.

2.2 Example calculations

Figures may differ depending on your own property and individual circumstances.

2.2.1 Biomass

The tariff rate is multiplied by the annual deemed heat load (kWh) taken from the EPC.

The calculation would look like this:

$$\begin{array}{ccccccc} \text{Deemed heat} & & \text{Tariff rate in} & & & & \text{Annual RHI} \\ \text{demand in} & \mathbf{X} & \text{p} & \mathbf{/} & 100 & \mathbf{=} & \text{payment} \\ \text{kWh} & & & & & & \text{received in } \pounds \end{array}$$

So, if the deemed heat demand is 16,427kWh then:

$$16,427 \times 6.43p / 100 = \text{£}1,056.26/\text{year}$$

This would mean you are paid £264.07 per quarter, and £7,393.82 over the lifetime of the RHI which is for 7 years.

2.2.2 Solar Thermal

The tariff rate is multiplied by the deemed heat load, taken from the 'estimated annual generation' figure on the MCS certificate.

$$\text{Deemed heat load in kWh} \times \text{Tariff rate in p} / 100 = \text{Annual RHI payment received in £}$$

So, if the deemed heat demand/ estimated annual generation is 2,000kWh then:

$$2,000\text{kWh} \times 19.51p / 100 = \text{£}390.20/\text{year}$$

This would mean you are paid £97.55 per quarter, and £2,731.40 over the lifetime of the RHI which is for 7 years.

2.2.3 Ground or Air Source Heat Pumps

The calculation for heat pumps factors in the SPF figure/ the electricity used to run the pump, and so the calculation works slightly differently, unless you are metered for payment.

$$\text{Deemed heat demand in kWh} \times (1-1/\text{SPF}) \times \text{Tariff rate in p} / 100 = \text{Annual RHI payment received in £}$$

So, for a GSHP with a deemed heat demand of 10,000kWh and a SPF of 3.4 then:

$$10,000\text{kWh} \times (1-1/3.4) \times 19.10p / 100 = \text{£}1,356.10/\text{year}$$

This would mean you are paid £339.03 per quarter, and £9,492.70 over the lifetime of the RHI which is for 7 years.

For an ASHP with a deemed heat demand of 10,000kWh and a SPF of 2.5 then:

$$10,000\text{kWh} \times (1-1/2.5) \times 7.42 / 100 = \text{£}445.20/\text{year}$$

This would mean you are paid £111.30 per quarter, and £3,116.40 over the lifetime of the RHI which is for 7 years.

2.3 Savings

Your RHI payments are based on the heat demand figure given on your EPC or in the case of Solar thermal the figure from your MCS certificate. These figures would not be used to calculate the sort of savings you would expect to make on your energy bills.

To work this out your installer, prior to installing your renewable heat system, will need to carry out a site survey and look at your energy usage and the fuel used. Following this the installer should be able to calculate the savings you would be likely to make on your energy bills. Savings will differ depending on the main fuel your property uses and can be expected to continue for 20 years, the expected lifespan of these technologies.

Please note for biomass and heat pump systems your household's energy requirements as stated in the EPC and by the installer may differ because they are calculated in different ways.

3. Further eligibility criteria

3.1 The owner

- You must own the property OR own the technology at least to be able to claim the RHI.
You must live in England, Wales or Scotland. Those in Northern Ireland will not be eligible.
 - You must have a valid bank account.
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3.2 The property

- You must get a Green Deal Assessment carried out on the property before being able to claim the RHI (exceptions for landlords may apply, please speak to Ofgem for more information).
- As part of the GDA you will receive an EPC which states the heat demand figures for space and water heating.
- Heat technologies work best when the property is well insulated and so should your EPC recommend that you have loft and cavity wall insulation installed then you must do so to claim the RHI unless there is a reason why you cannot. For information on exemptions you can look on Ofgem's website here:
<https://www.ofgem.gov.uk/publications-and-updates/evidence-insulation-exemption> Proof of exemption will be required.
- Once insulation has been installed you will need to get a new EPC issued to show this has been done.
- If your building is a new build then you would not be eligible for RHI unless it is self-build and you have helped build it yourself in some way. More information on this can be found at Ofgem's

website.

here: <https://www.ofgem.gov.uk/publications-and-updates/factsheet-i-have-newly-built-house-am-i-eligible>

- In some cases it may be unclear if your property is classed as domestic or non domestic for example, if you work from home. More information on this can be found on Ofgem's website here: <https://www.ofgem.gov.uk/publications-and-updates/renewable-heat-incentive-rhi-domestic-or-non-domestic>
- There may also be other reasons why your property is not a normal scenario, for example if the heat system is connected to an outhouse. You can find more information on Ofgem's website here: <https://www.ofgem.gov.uk/environmental-programmes/domestic-renewable-heat-incentive/about-domestic-renewable-heat-incentive>

You must have a Green Deal Assessment and an EPC to register for the RHI.

3.3 Requirements to claim the RHI

To claim the RHI you will need:

- **A Green Deal Assessment number**
- **An EPC number**
- **An MCS Certification number**
- **Personal information and bank details**

You will also need to be given a Compliance Certificate from your installer. This document should include all the relevant information regarding your installation and all that you will require to apply for the RHI.

Other instances where further information may be required from you include:

- If you are subject to metering
- If you are a landlord
- If the building is a self-build
- If you cannot install insulation for some reason
- Or if you have received public funding towards the technology

3.4 Grants and other incentives

Where consumers have received public grants which have contributed towards installing their renewable heating system then this may affect your RHI payments. The grant is deducted from the quarterly payments spread across the 7 years of the RHI payments. Grants include the Renewable Heat Premium Payment (RHPP).

Ofgem hold a list of grants that are classed as publicly funded and will be deducted. You may need to provide proof of your grant to Ofgem at the application stage.

3.5 The RHPP and Legacy systems

The RHI for legacy applicants is now closed.

3.6 Different organisations and the parts they play

3.6.1 The Microgeneration Certification Scheme (MCS)

The Microgeneration Certification Scheme is an important quality assurance mechanism that sets out both: standards for installers of small-scale heat and power generators; and standards for small-scale heat and power generating products.

To qualify for the RHI your renewable heat technology must be installed by an MCS certified installer in line with the MCS standards. The installer should also provide you with an MCS Certificate. The number from which is required when you apply for the RHI.

The MCS website is a good place to find an accredited installer.

3.6.2 Ofgem

Ofgem will be administering the RHI and handling all applications. They are responsible, along with DECC, for the RHI regulations. Ofgem's website provides a wealth of information on the RHI along with fact sheets, essential guides and videos. You will also find here the application form to register for the RHI.

Products installed must be eligible for the RHI and a list of eligible technologies can be found on Ofgem's website. This is known as the PEL.

3.6.3 Renewable Energy Consumer Code

Members of the Renewable Energy Consumer Code must abide by the Consumer Code designed to ensure high standards of service for domestic consumers. The Renewable Energy Consumer Code is part of Trading Standards Institute self-regulation *Consumer Codes Approval Scheme*. And it is a requirement of a MCS-certified installer to also belong to a Trading Standards Institute approved code. Therefore your installer should be both a member of RECC and be accredited by MCS.

Check the [Renewable Energy Consumer Code website](#) to see which installers are registered and what you should expect from a RECC member.

4. Registration

4.1 Installing a system and claiming the RHI

- Before you sign a contract the installer should survey your site to ensure it is suitable for a particular technology.
- You should have a Green Deal Assessment carried out by an assessor who may or may not be appointed by your installer.
- You will receive an EPC and should you need to do any further work to insulate to your property this must be done and a new EPC commissioned.
- Once your system has been installed, the MCS installer will register the installation on the central MCS register and will provide you with a certificate of installation. They should also provide you with the compliance checklist obtained from MCS. This should contain all the information required for

application.

- You can then apply for the RHI via Ofgem's website first making an account on the RHI register. Your application may be processed straight away and automatically, or it may go into manual review. Manual review is where
- Ofgem may require some further information from you regarding your application.
- Should you, the applicant, not have access to the online application process then you can call and complete an application via Ofgem's Call Centre.
- Once registered you will have log in details for the Ofgem website and be able to monitor your RHI payments.

4.2 Registration and deadline

The owner of the system is always responsible for making the RHI application. Please check if you need to meet any deadlines when submitting your application.

The system will need to be registered within 12 months of it being commissioned. If an applicant is successful payments will be backdated from the date of application. Date of application is taken from when Ofgem received the completed application form containing all the relevant supporting documentation and completed declarations.

5. Metering and monitoring

5.1 Metering for payment

In most cases the RHI payments are based on the deemed heat demand figure on the EPC. There will however be other cases where you will need to have a meter installed so you can provide Ofgem with quarterly readings so they can pay you. This is known as being 'metered for payment.'

Cases where metering is required include:

- Where the consumer has had a biomass system installed which does not heat the whole property,
- Where there is a secondary heating system in the property.
- Where your system is bivalent and capable of using another fuel other than the renewable fuel.
- Where the property is occupied for less than half the year.

This should be discussed with your installer before installation and your installer will be responsible for answering the technical installer metering questions (imqS) in the 'Metering for Payment' part of the RHI application form.

More on 'metering for payment' can be found on Ofgem's website and the IMQs can be found here:

<https://www.ofgem.gov.uk/publications-and-updates/installer-metering-questions-heat-pumps>

Solar thermal systems do not require metering.

5.2 The Metering and Monitoring Service Package

The Metering and Monitoring Service Package (MMSP) requires RHI applicants to volunteer to be metered and in return volunteers will be paid a little extra for taking part. This service is only for those with heat

pumps or biomass boilers that burn wood pellets and can be counted. MMSP payments will not affect your normal RHI payments.

MMSP may be taken up if you are interested in analyzing your heating data and/ or monitoring your system's performance for whatever reason. Data is logged and sent to a website portal. Installers may also use the information to check if your system is working correctly and should they find any issues they can have them rectified quickly.

- Heat pumps receive an extra £230 per year.
- Pellet biomass boiler will receive an extra £200 per year.

The packages are available on a first come first serve basis, with a limited budget expected to fund approximately 2,500 applicants in the first year with more available in years two to seven.

To get one you would need to buy or lease a Metering and Monitoring Service Package from an MCS installer. There must also be a signed agreement in place between the MCS MMSP installer and the applicant saying that the installer will provide an ongoing support service. The applicant must then register the MMSP with Ofgem. This agreement will be valid for a maximum of 7 years. Installers are required to have access to the data collected through the MMSP so that you can check how the system is performing on behalf of the customer.

MMSP packages can be installed and registered with Ofgem at any point during the 7 years of your RHI payments but will only last as long as your RHI payments do.

6. Further information

6.1 Tax

Consumers will need to talk to HMRC about whether they will be taxed on their RHI payments.

6.2 Inflation

The RHI is index linked which means tariffs will increase (or decrease) with inflation.

6.3 Multi installations

A property with multi systems installed will be considered for one RHI application only. This does not include where there is one system used to heat space and another to heat the water.

6.4 Degression

The RHI payments are to be subject to degression each quarter depending on the uptake of the RHI in that quarter and if targets have been met. Payments will either decrease by 10 or 20% depending on the volume of the up take. If the RHI is to be subject to degression then the new RHI rates will be published a month before they come into play.

When a consumer signs up to the RHI then this is the rate they will be paid for 7 years, not factoring in inflation.

6.5 Third party ownership

Currently the Domestic RHI regulations does not allow for third party ownership models however, there are still opportunities under the current scheme rules for third parties to develop financing arrangements with homeowners or occupiers. For example, the homeowner may apply for the Domestic RHI themselves and arrange for the payments to be split between them and the third party. All applications will be assessed on a case by case basis, so eligibility is not guaranteed. Please see Ofgem's factsheet on this for more information.

7. Useful sites and links

Ofgem – Ofgem administrates the RHI and handles all applications and hosts the PEL. Ofgem's website also provides lots of further information on the RHI in the form of fact sheets, essential guides and videos.
<https://www.ofgem.gov.uk/environmental-programmes/domestic-renewable-heat-incentive>

Energy Saving Trust – The Energy Saving Trust is a government funded body who can provide fair and unbiased advice on saving energy. As well as the fact sheets mentioned previously under each of the technologies they have further guidance on: 'Finding Installers and products' and 'Financial support for renewable heat'. ESAS forms part of the EST and is contracted by DECC to handle pre application enquiries on the RHI.

<http://www.energysavingtrust.org.uk/domestic/content/renewables>

DECC – The Department of Energy and Climate Change are the government department who put together the framework and the regulations for the RHI. They are currently working on a RHI calculator to help consumers estimate what they might be paid by the RHI.

<https://www.gov.uk/domestic-renewable-heat-incentive>

MCS - The Microgeneration Certification Scheme (MCS) is an important quality assurance mechanism that sets out technical and process standards for small-scale generation systems. To receive RHI payments your installer must be MCS certified. To find an MCS accredited installer you can search online here:

<http://www.microgenerationcertification.org/consumers/installer-search>

Which – Which campaigns to make your lives fairer, provides advice to help you make informed decisions and their services and products put your needs first to bring you better value.

<http://www.which.co.uk/energy/creating-an-energy-saving-home/guides/renewable-heat-incentive-rhi-explained/>

Yougen – Yougen is an independent website providing practical information and advice on energy efficiency and renewable energy.

<http://www.yougen.co.uk/blog-entry/2010>

[/Domestic+renewable+heat+incentive%3A+your+questions+answered/](http://www.yougen.co.uk/blog-entry/2010/Domestic+renewable+heat+incentive%3A+your+questions+answered/)

RECC also has some 'Top Tips' for consumers thinking about installing a renewable energy system.

<https://www.recc.org.uk/consumers/top-tips>

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