THE RENEWABLE HEAT INCENTIVE

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Introduction

As part of their Renewable Energy Strategy, the UK Government is aiming to greatly increase the proportion of our heating demand met by renewable energy sources.

A system of 'Feed-in-Tariffs' (FiTs) was introduced in April 2010 with the aim to encourage the generation of renewable electricity. A year later, in April 2011, a similar scheme will start, with the aim of promoting the installation of renewable heating systems.

The scheme is called the Renewable Heat Incentive (RHI), and will make both small and community-scale renewable heating systems much more financially attractive.

Which technologies does it cover?

At a domestic level, the incentive will apply to:

- solar water heating
- biomass, e.g. wood chip & pellet fired stoves & boilers and 'batch' log boilers
- ground, air or water source heat pumps.

To read more about these options, see our information sheets *'Solar Water Heating', 'The Wood-fuelled Home', 'Ground Source Heat Pumps'* and *'Air Source Heat Pumps'*.

There is a proposal to include 'bioliquids' as well. This means using a biodiesel-like fuel to replace heating oil. However, we would be wary of this as a worthwhile option for many people. Growing oil crops needs much more land than growing wood, while the supply of recycled oils is small, and biofuels are already in great demand as road fuel.

Traditional appliances such as log stoves, ranges or open fires will not be covered. This is because they usually just provide additional heating to supplement central heating, and because they can often be run on non-renewable coal-based fuels.

At a larger scale, the RHI covers biogas from the anaerobic digestion of biomass wastes, and renewable combined heat and power (CHP) systems. See our information sheet on *'Biogas'* for more on this technology.

Only systems installed by an accredited installer using accredited products will be eligible – see below for details.

How much does the incentive pay?

The tariffs and lifetimes proposed in the current consultation for domestic-scale systems (less than 20 kW for solar water heating or less than 45 kW for all other technologies) are set out below. Please see the consultation documents for tariffs for medium and large scale systems.

Technology	Tariff	
	p/kWh	life time
Solar water heating	18	20
Ground source heat pump	7	23
Air source heat pump	7.5	18
Biomass	9	15
Bioliquids	6.5	15

NB: Water Source Heat Pumps will be eligible for either the GSHP OR ASHP tariff.

How will payments be calculated?

At a domestic scale, RHI payments will be based on a 'deemed' value for the heat demand of the property. In other words, the value of incentive paid will be based on an estimate of the "*reasonable heat requirement that the installation is intended to serve*". By basing RHI payments on an estimate, rather than the actual consumption, the scheme encourages energy efficiency and does not create a perverse incentive to use more fuel in order to receive higher payments.

The exact mechanisms for deeming are still under consultation. It is likely that the

assessment will be based on energy performance certificates (EPCs) for new buildings and on a methodology such as SAP (Standard Assessment Procedures) for existing buildings.

Until details of the deeming mechanism have been finalised, a transitional approach is used, with heat demand estimated independently by two accredited installers.

How & when can I start?

All new, eligible equipment ***installed after 15 July 2009*** will be covered by the scheme and will be treated as if it was installed in April 2011, i.e. payments will be made from April 2011 on.

To be eligible for RHI tariffs, both the system and the installer must be accredited with the Microgeneration Certification Scheme (MCS).
Therefore, the first step should be to get quotes from several MCS installers. The list of installers and products can be found at www.microgenerationcertification.org

Further Information

We run several **residential courses** on domestic renewable energy systems
Web: www.cat.org.uk/shortcourses
Tel: 01654 704952

We can give in-depth advice on a particular project though **CAT Consultancy**
consultancy@cat.org.uk or 01654 705991

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Example of calculating RHI entitlement

Note that the RHI rates have not been finalised yet, so details are subject to change.

A household's useful energy demand for heat averages 15,000 kWh per year. The property is a three bed semi-detached house with cavity wall type construction. A switch from current gas use to a combination of a wood pellet ***biomass*** and ***solar thermal*** is being considered. Under the proposed deeming approach based on an on-site assessment by an accredited installer, the process for determining the level of RHI compensation could be as follows:

- The installer determines that a reasonable space heating requirement for this property is 10,000 kWh, taking into account some straightforward energy efficiency measures the household could implement, for instance installing loft and cavity wall insulation. Hot water will require approximately 2,500 kWh/year.
- The installer might conclude that the solar water heating panels will produce 60% of the 2,500 kWh hot water requirement: 1,500 kWh at a tariff of 18p / kWh
  = £270 per year for the solar water heating system, paid for 20 years
- The remaining hot water demand of 1,000 kWh / year, and the space heating requirement of 10,000 kWh will be covered by the wood pellet biomass system:
  → 11,000 kWh at a tariff of 9p / kWh
  = £990 per year for the biomass system, paid for 15 years.

Total RHI payments would be over £1,260 each year for the first 15 years (and around £270 per year for the following 5 years). This amount would be paid as a fixed (deemed) annual amount regardless of actual energy use.