

A beginner's guide to the Renewable Heat Incentive

The non-domestic Renewable Heat Incentive is a government payment scheme designed to encourage organisations to invest in systems which generate heat from renewable sources.

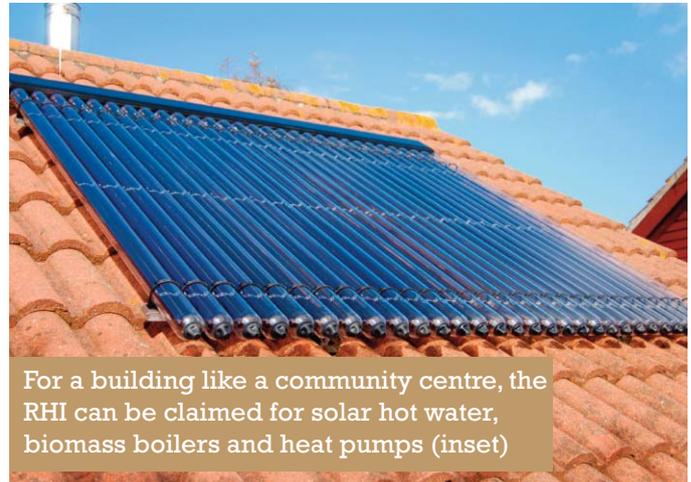
The aim of the scheme is to reduce our use of fossil fuels like gas and oil and increase the amount of energy generated by renewable technologies such as biomass boilers, solar thermal panels and heat pumps. The majority of energy used in a community building is for space heating, so the Renewable Heat Incentive (RHI) is designed to encourage organisations to install renewable heating systems in their buildings.

The scheme applies to domestic and non-domestic systems, though the details vary somewhat between them. The domestic scheme launched in April 2014 - all the details of this can be found on a separate CSE advice leaflet. The non-domestic RHI launched in 2011 and is open to industrial, commercial, public sector and not-for-profit organisations who install eligible heating systems.

Which technologies and fuels are eligible?

Various heating systems can be installed in a non-domestic setting like a community building and qualify for the RHI. There are sometimes size restrictions on particular eligible technologies. Here are some of the most likely systems that could be installed as part of a community project:

1. **Solar thermal.** This type of solar panel uses energy from the sun to heat water. Installations less than 200kWth are eligible.
2. **Biomass boilers** for burning wood-based products such as logs or wood pellets to provide heating and hot water. All sizes are eligible, but different tariff brackets exist up to, and over, 1MWth systems.
3. **Ground source heat pumps, water source heat pumps and air-to-water source heat pumps.** These extract the 'latent heat' from the ground, water or air and provide space heating and hot water. All sizes are eligible, but there are two tariff brackets for installations less than, and over, 100kWth.



For a building like a community centre, the RHI can be claimed for solar hot water, biomass boilers and heat pumps (inset)



Additional technologies for the non-domestic RHI include biogas, geothermal, energy-from-waste systems and CHP (combined heat and power).

Ofgem manage the non-domestic RHI. All of the finer details on system criteria and eligibility can be found on their website: www.ofgem.gov.uk/RHI. Any changes to the scheme and periodic reviews will also be published there, as rates are liable to change.

For certain renewable heat technologies rated below 45kW, your installer should be Microgeneration Certification Scheme (or equivalent) accredited. See www.microgenerationcertification.org for details.



Want renewable heating in
your home?
See our other leaflet about
the domestic RHI at
www.cse.org.uk/loveyourhome

How much will we be paid?

The table below shows the current rates for the more popular technologies. These payments are index-linked and will be calculated to cover the predicted lifetime of the technology (assumed to be 20 years), paid on a quarterly basis and based on the actual heat output of the system.

Technology	Payment per kilowatt hour (kWh)
Biomass boilers (less than 200kWth)	Tier 1: 8.8p
	Tier 2: 2.3p
Biomass boilers (between 200kWth and 1MWth)	Tier 1: 5.4p
	Tier 2: 2.3p
Ground source heat pumps (less than 100kWth)	4.9p
Solar thermal	9.4p



Photo: Jake Rome

For biomass tariffs, the tier 1 tariff is paid until the system has generated the equivalent of 1,314 hours of heat. Any further heat generated beyond this over a 12 month period is then paid at the tier 2 tariff. **At the end of the 12 month period, the payments will return to the tier 1 level for the next 1,314 hours of heat, and then reduce again until the end of the next 12 months. This pattern will be repeated for the full 20 years.**

So here's an example of how payment for a small (<200kWth) biomass might work. We're projecting that a 100kWth biomass boiler will use 167,000kWh per year.

Tier 1 kWh: 1,314 hours x 100kw = 131,400kWh

Tier 1 payment: 134,000 x 8.8p = £11,563

Tier 2 kWh: 167,000 – 131,400 = 35,600kWh

Tier 2 payment: 35,600 x 2.3p = £819

Total annual RHI payment = **£12,382**

Regulation

The energy regulator Ofgem requires that recipients of the RHI comply with various obligations throughout the lifetime of the scheme. For non-domestic installations, organisations are responsible for submitting meter readings every three months from your accreditation date.

Biomass systems have additional obligations and will require detailed fuel records to be kept of the source and quantity of the fuel. Further details on the regulations can be found on the Ofgem website.

Things to think about and next steps

Even with the RHI, investing in a solar hot water system, a heat pump or a biomass boiler isn't a decision to be taken lightly, and it may not be worth your while. In particular, if you're currently heating the building with mains gas (which is cheap), your payback time will be much longer than if you're using a more expensive fuel like oil or electricity.

So when you do your calculations, remember to take any savings on fuel costs into account as well as the RHI payments. And bear in mind, too, that if you can combine the installation with works that you need to do anyway, for example having solar thermal installed at the same time as having a roof re-done, this could reduce the cost.

Other issues to consider are fuel storage (if you're thinking of a biomass system), sourcing your fuel locally (again for biomass) and whether or not you'll need planning permission (which may involve additional costs).

How to make an RHI application

Non-domestic applications should be made through Ofgem on their website: www.ofgem.gov.uk/RHI.

You can ask detailed questions about this process to the Ofgem RHI team on 0845 200 2122 or rhi.enquiry@ofgem.gov.uk



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The Centre for Sustainable Energy is a national charity (no 298740) that helps people change the way they think and act on energy.

For more help, advice and support on community energy projects, get in touch with CSE's communities team:

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www.cse.org.uk/communities