Do you fully understand the RHI?

Ian Hughes of HWA member Kingspan Hot Water Systems offers a guide to the Renewable Heat Incentive and what lies ahead for the industry

hot water association

Existing feed-in tariff incentives have led to an increase in the provision of renewable electricity in the UK, evident in large-scale wind farms and domestic solar panels (PV).

In March this year, the Department of Energy & Climate Change (DECC) announced the introduction of the Renewable Heat Incentive (RHI).

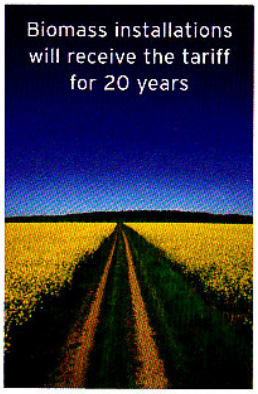
With around half of UK energy consumption being used to provide heating for every kind of building, the purpose of the RHI is to accelerate the change to renewable energy sources.

HOW RHI WILL WORK

The introduction has been split into phases, the first supporting only non-domestic applications where renewable heat can be practically administered, involving a heat metering requirement.

Large-scale emitters of heat are targeted, from major industrial heating through small businesses to community heating projects, covering installations in England, Scotland and Wales, but not Northern Ireland.

Technologies supported in this phase will include biomass, solar thermal, heat-pumps, on-site biomass and deep geothermal.



Solar thermal and heat pumps up to 45kWth will need to be MCS or equivalent certified, with larger installations requiring Office of Gas & Electricity Markets (OFGEM) verification.

Only ground- and water-source heat pumps will be eligible for phase one of the RHI, with air source heat pumps being excluded.

The intention is to seek Parliamentary approval for phase one in July 2011, with applications being processed as soon as possible. Non-domestic installations completed after 15 July, 2009, will be eligible for support under the scheme as long as the installation meets the eligibility criteria.

For these sectors a long-term tariff is being introduced.

WHAT ABOUT DOMESTIC?

Of all the energy used for heating, 55% is used for domestic heating, and some 80% of all UK domestic heating is generated through gas boilers.

Only 1% use renewable energy to heat housing.

During phase one, the government will introduce the Renewable Heat Premium Payment (RHPP) for the domestic sector, covering a spread of technologies and comprising a one-off payment to the householder to subsidise installation costs.

A requirement of this scheme is for participants to provide feedback on how the equipment works. Suppliers will be asked to provide follow up service on any issues raised, and this feedback will be used to develop phase two of the RHI.

The launch of the RHPP is planned for July 2011, with more details to be announced soon.

WHAT NEXT?

In 2012, the government plans to introduce the Green Deal and phase two of the Renewable Heat Incentive (RHI), which will be for the domestic sector.

People who have received the RHPP will receive a long-term RHI tariff, as will people who have installed an eligible installation since 15 July 2009.

It is expected that eligibility will be extended to air source heat pumps in 2012 as part of phase two, while tariffs and eligibility criteria are still to be set.

OPPORTUNITIES

The government will be supporting the 'Insulate then Generate' plan, through the Green Deal, as the best way to reduce emissions from domestic heating.

Heat in domestic housing falls into three main categories, the largest being space heating, followed by water heating and cooking.

As insulation levels in housing increase, the percentage of heat generation used for space heating will decrease and, therefore, the percentage of energy used for the generation of hot water will increase.

As part of the installation of the renewable energy it may be necessary to upgrade the water storage device to be able to take inputs from more than one heat source.

A suitable storage device should be selected in line with the requirements of the household and the recommendations of the renewable energy equipment supplier.

Consideration should be given to the insulation performance of the storage device. To obtain the RHI payments, the installation will need to be carried out by an MCS-approved installer.

Since the introduction of the electric feed-in tariff in April 2010, the number of MCS-certified companies has increased from 470 to 1,800.

Of these companies, 800 are eligible to carry out heat installations.

To be able to take advantage of the domestic phase of RHI, installers will need to be MCS approved and need to consider certification in preparation for this.

More information on the MCS can be found online at www.microgenerationcertification.org.

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LEVELS OF SUPPORT

Tariff name	Eligible Technology	Eligible Size	Tariff rate (pence/kWh)	Tariff Duration (Years)	Support Calculation
Small Biomass	Solid biomass; Municipal Solid Waste (incl. CHP)	Less than 200kWth	Tier 1; 7.6 Tier 2; 1.9	20	Metering Tier 1 applies annually up to the tier break. Tier Break is installed capacity x 1314 peak load hours
Medium Biomass		200kWth and above; less than 1000kWth	Tier 1; 4.7 Tier 2; 1.9		
Large Biomass		100kWth and above	2.6		Metering
Small Ground Source	Ground-source heat pumps; Water-source heat pumps; deep geothermal	Less than 100kWth	4.3	20	Metering
Large Ground Source		100kWth and above	3		
Solar Thermal	Solar thermal	Less than 200kWth	8.5	20	Metering
Biomethane	Biomethane injection and biogas combustion, except from landfill gas	Biomethane on all scales, biogas combustion less than 200kWth	6.5	20	Metering

Different technologies have different levels of support under the RHI