

Demand for storage will increase

The latest government renewable energy initiative is likely to increase demand for water storage heaters, according to Stuart Elsy of HWA member OSO Hotwater UK



With heating accounting for about half of the UK's CO₂ emissions, the government is increasingly looking towards renewable energy as part of the solution to avert an energy crisis and reduce carbon emissions.

The Renewable Energy Strategy, first announced in July 2009, set out the path to achieving the target of 15% renewable energy generation by 2020, on the way towards achieving an 80% reduction in carbon emissions by 2050.

The Department of Energy & Climate Change (DECC) has now released the Renewable Heat Incentive (RHI) to provide a framework for

renewable energy to flourish in the UK.

Announced in February 2010, the key part of the RHI is to offer feed-in tariffs from April this year to provide an incentive to renewable energy generation at all levels from a variety of sources, including the domestic micro-level.

The RHI is the first scheme of its type in the world, with the government looking to occupy the high ground on the world stage of providing investment to encourage development of renewable energy generation.

A wide range of technologies are included, such as air-, water- and ground-source heat pumps, solar thermal, biomass boilers, renewable combined heat and power, together with biogas, bioliquids and the injection of biomethane into the natural gas grid.

The system will be operated and policed by the Microgeneration Certification Scheme.

Annual payments will be made to generators for small installations, most likely directly into the owners' bank accounts, with quarterly payments for larger systems producing over 45kw.

Payments would be set for the lifetime of the equipment, typically between 10 and 23 years depending on the technology. Future payments would also be inflation adjusted.

Tariffs have been proposed to provide a rate of return of 12% on the additional capital cost

of renewables, with a lower rate of 6% for solar.

Payments for domestic and other small installations are to be calculated from the annual amount of heat output in kwh. This will be a set amount, determined when the equipment is installed, and will encourage low-energy consumption on the part of the beneficiary. Large installations will have payment made based on a metered energy output.

RHI will remain open to new projects until at least 2020, although tariff levels will be reviewed periodically according to current technology costs.

IMPLICATIONS FOR WATER STORAGE

While only solar thermal is singled out in the RHI proposal as having need for a hot water storage element, the reality is that all these technologies will require hot water storage to provide acceptable levels of comfort in domestic properties.

Families need hot water, and in recent years the option has been open for installers to fit a water storage system such as an unvented or vented cylinder, or to go down the instantaneous combi boiler route.

Heat pumps, wind

power, solar thermal and other similar renewable sources do not have the high power levels required to produce instant hot water.

As time moves on, the

with a renewable bio element.

For the heating industry, installers must be certified under MCS for a customer to be able to access the RHI



Domestic installations will receive a set annual payment

likelihood is that more properties will be built with a dedicated hot water cylinder to take advantage of renewable energy.

The RHI will be available to all households in the private and social housing sector, with both landlords and owner-occupiers having access to the feed in tariff incentives on offer.

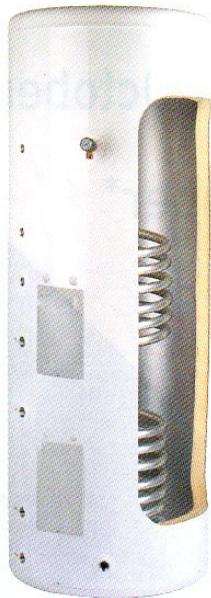
RHI has particular benefits in rural communities that are not connected to the national gas grid. This isolation results in a higher percentage of fuel poverty among rural households than in urban areas.

Electrically-heated properties could switch to heat pumps, while households with oil-fired boilers could be offered a subsidy to convert the boiler, so that it will accept a blended fuel

subsidies and tariffs. The installer will provide details of the system to Ofgem for registration on its database.

Opportunities are also available to installers over the lifetime of the system, as RHI will demand evidence in the form of maintenance reports that the system is still operational and contributing green energy, which would include confirmation that heat pumps are still operating at an efficient coefficient of performance.

While green technology is advantageous to a property, much of the good could be undone because of poor building standards and low levels of insulation. As such, a minimum basic level of energy efficiency would be required to qualify for the scheme.



More properties will be built with a dedicated hot water cylinder