

In 2003, Merton Borough Council introduced a mandatory 10% on-site renewable energy generation requirement for all non-residential development over 1000m². Subsequently, many of the Local Authorities across the South East adopted this or a more challenging requirement for new developments.

Mandatory requirements were introduced for new housing developments in 2008, when the Government introduced the Code for Sustainable Homes. All new homes must be assessed against a list of sustainability criteria, including energy and water efficiency, CO₂ emissions and surface runoff. The code uses a 1 to 6 star rating system. From May 2008 all new homes were required to include a Code Certificate with their Home Information Pack (HIP) and the Government has announced a 10 year timetable towards all homes achieving code level 6 (carbon neutral) by 2016. Many Local Authorities are independently adopting more challenging timetables towards that target.

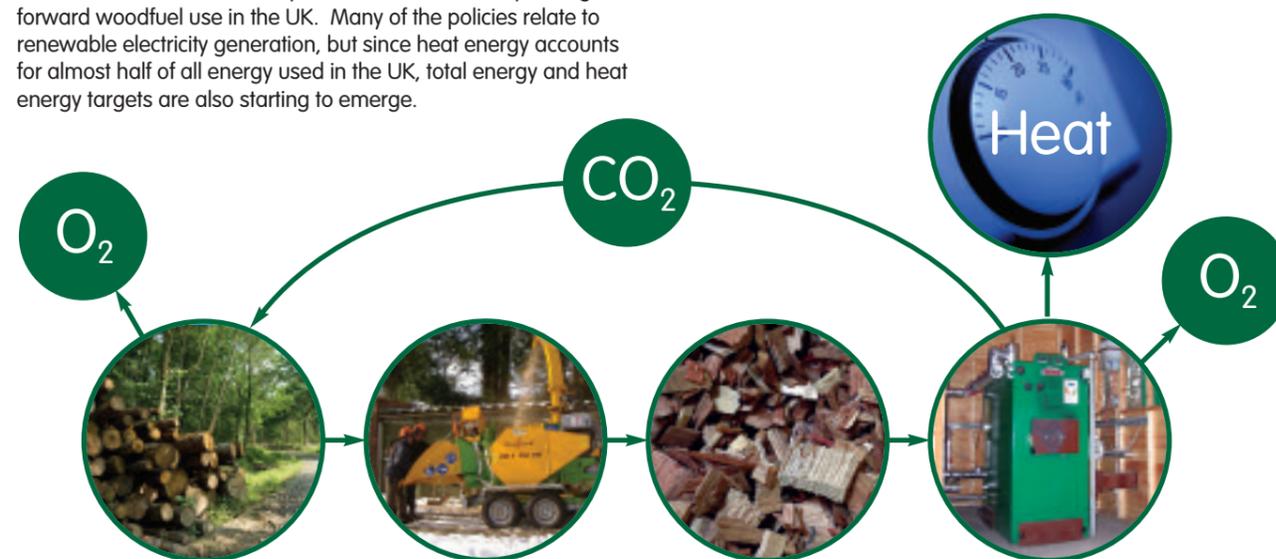
For many developments the most economic way in which these target can be met is through the use of wood fuelled heating.



Introduction to wood fuel and policy drivers

Wood-fuelled boilers offer a technically simple and cost-effective means to heat buildings whilst realising large savings in carbon emissions. The CO₂ that is released when wood fuel is burnt is equivalent to that taken from the atmosphere through photosynthesis during tree growth. Even allowing for CO₂ generated during planting, harvesting, processing and transport of the wood, replacement of fossil fuel with wood fuel will typically reduce net CO₂ emissions by over 90%, assuming that the wood supply is managed sustainably.

This datasheet describes the policies that are currently driving forward woodfuel use in the UK. Many of the policies relate to renewable electricity generation, but since heat energy accounts for almost half of all energy used in the UK, total energy and heat energy targets are also starting to emerge.



Typical net CO₂ Emissions from Different Fuels

Fuel Type	Kg CO ₂ per kWh
Coal	0.32*
Oil	0.25*
LPG	0.214*
Natural Gas	0.19*
Biomass	0.025**

*Defra, July 2005, 'Guidelines for Company Reporting on Greenhouse Gas Emissions'

**PTI, March 2005, 'Carbon and Energy Balances for a Range of Biofuels Options.'

The National Picture Climate Change Act (2008)

In November 2008, the UK passed legislation that introduced a long-term legally binding framework to address climate change, the Climate Change Act 2008.

The main provisions of the Act include:

- Legally binding greenhouse gas emissions reduction targets of 26% by 2020 and 80% by 2050 against a 1990 baseline
- A carbon budgeting system which cap emissions over 5 year periods.
- The creation of a Committee on Climate Change. An independent expert body to advise Government on the level of budgets and report on progress.

Renewable Obligation (2002)

The Renewable Obligation requires licensed electricity suppliers to supply an increasing percentage of their electricity from renewable sources. Renewable Obligation Certificates (ROCs) are issued to electricity generators for the units of renewable electricity they generate. Each supplier is required to present an appropriate number of ROCs to the regulator Ofgem each year or pay a buy-out price. Buy-out revenue is recycled back to the suppliers that presented ROCs in proportion to the number of ROCs they presented.

From April 2009, the number of ROCs received for each of the eligible biomass technologies is shown in the table below. For comparison, onshore wind and hydroelectric are allocated 1 ROC/MWh.

Technology	Number of ROCs per MWh
Co-firing of non energy crop (regular) biomass with fossil fuel	0.5
Co-firing of energy crops with fossil fuel	1
Dedicated regular biomass (electricity only)	1.5
Dedicated regular biomass with combined heat and power (CHP)	2
Dedicated biomass with energy crops (with or without CHP)	2
Advanced biomass conversion technologies (anaerobic digestion, pyrolysis, gasification)	2

Renewable Energy Strategy (2009)

In 2007, the UK agreed to binding EU targets to help deliver 20% of the total EU energy (electricity, heat and transport) from renewable sources by 2020. The UK's share of this target is 15% of the total energy consumed in the UK, which is a 10 fold increase on the 2006 level of 1.5% renewables in our energy mix. The Renewable Energy Strategy 2009 sets out how the Government proposes to meet this challenging target.

Carbon Reduction Commitment

The Carbon Reduction Commitment is a mandatory emissions trading scheme which will affect around 20,000 large private and public sector organisations across the UK which are metered half-hourly and consume more than 6000 MWh of electricity. Participating organisations will be required to monitor their CO₂ emissions and purchase an 'allowance' for every tonne of CO₂ they emit. The Government will publish a league table showing the comparative performance of participants and the money raised from the sale of allowances will be recycled back to the participants. The relative position they hold on the league table will define how much revenue they receive. The scheme starts in April 2010.

Forestry Commissions Woodfuel Strategy

The Forestry Commission's Woodfuel Strategy for England was launched in 2007. The main aim of the Strategy is to bring an additional two million tonnes of wood into the market, annually, by 2020 saving 400,000 tonnes of carbon every year – the equivalent of 3.6 million barrels of crude oil and enough to supply 250,000 homes with energy. To achieve this target we will be focusing our efforts on the potential wood resource available in the 60% of English woodlands that are currently under-managed.

A woodfuel implementation plan is currently being developed which will set out how the Forestry Commission plans to achieve the Strategy's targets.

Renewable Heat Incentive

To help meet the EU 2020 target, the Government has proposed a Renewable Heat Incentive scheme to expand renewable heat use from technologies such as solar thermal, ground source heat pumps and woodfuel heating.

Details of the scheme have not yet been finalised and Government will be consulting widely on all aspects in 2009, with an initial consultation at the end of 2009. However, the following may be considered as potential features:

- It is expected that the incentive will apply to generation of renewable heat at all scales, whether it is in households, communities or at industrial scale.
- The incentive should also cover a wide range of technologies including biomass, solar hot water, air- and ground-source heat pumps, biomass CHP, biogas produced from anaerobic digestion, and biomethane injected into the gas grid.
- The RHI will probably be banded for example by size or technology.
- At smaller scales e.g. domestic households Government are currently considering whether the support payments could be provided as a lump sum up front.

The incentive payments will be funded by a levy on suppliers of fossil fuels for heat. These are mainly licensed gas suppliers – but could also include suppliers of coal, heating oil, LPG etc.

The RHI will provide financial assistance to generators of renewable heat and is expected to be in place by April 2011.

The Regional Picture

Regional Spatial Strategy

The Energy Efficiency and Renewable Energy Strategy was published in 2004 and now forms part of the Regional Spatial Strategy. This set out a regional target to produce 5.5% of the electricity generated in the region from renewables by 2010 and 16% by 2026. The South East has already met its 2010 electricity target and is on track to meet its 2026 target.

Regional Forestry Framework

'Seeing the Wood for the Trees' sets out a framework for the future development of woodlands and forestry in the South East with the overarching vision for the South East's woods to make an increasing contribution to the sustainable development of the region, in both rural and urban areas. The four themes of the framework are shown in the diagram below.

The use of wood as a fuel provides the greatest opportunity to support the sustainable management of many of the south east's woodlands. It effectively provides the secure future for our woodland resource and helps enhance the ecological, economic and social benefits these woods provide.

