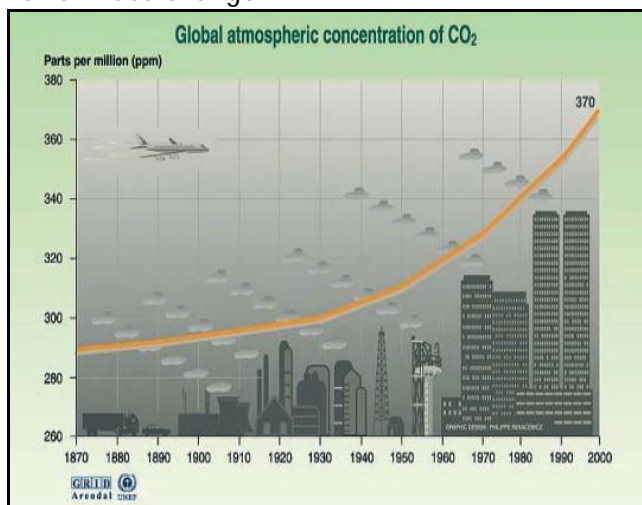


Achieving Our 80% Carbon Reduction

Most people have now been convinced by the arguments for reducing carbon emissions. The following graph illustrates the acceleration of global atmospheric concentration of carbon dioxide (CO₂) in the atmosphere since 1870, CO₂ being the principal 'greenhouse' gas responsible for climate change.



The UK is committed to cutting carbon emissions by 80% by 2050. The London Borough of Richmond has set a target of a 25% reduction in its carbon footprint by 2012. The target will be achieved through annual CO₂ reductions of 5.5% which will put it on the path to achieving a 80% reduction of CO₂ emissions by 2025

What Is Your Plan?

The cheapest reductions come by cutting unnecessary energy use, waste and travel. If you

need a new car, fridge, or TV choose carefully. And pledge never to buy a patio heater. Then switch to a specialist 'green' electricity provider such as Ecotricity or Good Energy. Switching to a green tariff with one of the major suppliers may achieve very little, as they are required by law to buy a certain percentage of renewables. This is normally more than enough

to supply their 'green' tariff customers.

What if you want to go further and invest in energy savings in your house? In August 2006, the Borough brought into force a new Sustainability Checklist, requiring renewable energy

for major new developments. This checklist is also a useful source of advice and contacts for homeowners (see below for contacts).

Insulation (Briefing Paper No. 2)

The Energy Saving Trust recommends that the first priority should be insulation for walls, lofts and windows. Living in Richmond upon Thames, however, it is more than likely that your house doesn't have cavity walls.

Nevertheless, internal or external insulation is still possible and there are residents and experts in the borough who can share their experiences here. For further information on insulation, see our Briefing Paper No.2 (Insulation Options) and the contacts listed below.

Once you have covered all the above, you can consider generating renewable energy on site. There are a number of technologies available, considered in turn below. For any installation that alters the appearance of your house, you must check with the Council whether you need planning permission.

Solar water heating (Briefing Paper No. 3)

In the south of England this is often going to be the most appropriate first choice, provided you have an unshaded roof facing somewhere between southeast and southwest.

We enjoy above average sunshine for the UK, and clearly the relative warmth of our climate means that less energy is needed. Furthermore, if you require only a small rise in temperature, the system

efficiency is higher not least because less heat is wasted in the transfer process. For this reason, solar water heating of swimming pools - which require only warm water - really is a must.

A typical domestic installation will supply around half your hot water needs and should cost between £3,200 - £4,500. The government grant has been reduced to £400, or 30% of installation costs, and is likely to dry up in a year or two. A few Councils supplement this, though not so far Richmond upon Thames. It is important to use an approved installer to get the grant. This will also avoid the sharks who are sadly still exploiting people in the Borough with exorbitant prices and inferior service. One point to note: if you are replacing your washing machine, many models cannot take advantage of the hot water from the solar heating, so seek advice.

Solar Photovoltaic (Briefing Paper no. 4)

This is used to generate electricity. It is still fairly expensive in comparison to solar water heating or energy efficiency and grants are relatively low as a percentage of the overall costs. In order to gain maximum efficiency from your solar photovoltaic system it needs to be sited on a south facing roof.

Microwind (Briefing Paper No. 5)

Domestic sized wind turbines are coming on to the market. However, given Richmond upon Thames's below average wind speed; they may not be a good

investment as many models are designed to work at 4m/s and above.

The 2m diameter 'Swift' turbine claims to displace around 1.3 tonnes of carbon emissions in a year (depending on wind figures, of course). This, and the price, is broadly similar to solar water heating. Up to 30% grants are available (see below for contacts).

Other Forms Of Renewable Energy

Other kinds of renewable energy include:

Heat pumps, which work like a fridge in reverse, extract heat from the ground (ground sources heating and cooling systems). Wood burning stoves, the oldest renewable source in the book, are now enjoying a revival. A school in the borough has had them installed, and collected garden waste produces the wood chips that can be used (see below for contacts). Domestic combined heat and power systems have been developed by WhisperGen that will replace your boiler and generate electricity with surplus heat. Powergen will be distributing them from early 2009.

Contacts

Richmond upon Thames' sustainability checklist:
www.richmond.gov.uk/spd_sustainable_construction_checklist_draft_adopted_august_2_.pdf

Insulation website:
Energy Saving Trust:
www.est.org.uk/myhome/insulation/solidwall/

Grant Sources:
Low Carbon Buildings
<http://www.lowcarbonbuildings.org.uk/how/householders/>

Wood Chips:
South East Wood Fuels Ltd:
www.sewf.co.uk

Combined heat and power:
www.whispergen.com/index.cfm

Other useful sources:
Centre for Alternative Technology:
www.cat.org.uk/

LB Richmond upon Thames:
www.richmond.gov.uk/home/environment/sustainability/energy.htm

Energy Savings Trust:
www.est.org.uk/myhome/

All recommendations within this leaflet are offered in good faith, with the benefit of related experience and knowledge. However, if you choose to carry any of them out, you do so entirely at your own risk. REN are unable to accept any responsibility for loss or damage resulting from such action.

Richmond Environment Network

Linking, supporting, developing & promoting local environmental and sustainability activities.

Website - www.richenvironmentnet.org.uk

Email - info@richenvironmentnet.org.uk