

## APPENDIX I: GLOSSARY

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AEAT	Commercial consultancy that produced Renewable Energy Targets for Yorkshire and Humber report.
Affordable Warmth	Ability of the lowest income groups, reliant on benefits or national minimum wage, to pay to heat their home to a recognised standard (opposite of Fuel Poverty).
Biomass	Solid fuel created from crops or forest residues. Examples range from traditional logs to processed fuels such as wood chips or wood pellets.
BREEAM	The Building Research Establishment Environmental Assessment Method, used for offices, industrial and retail units and schools. BREEAM for dwellings is now known as EcoHomes.
Building Regulations	Apply to all new developments setting minimum standards. Part L (the Conservation of Fuel and Power) provides rules on energy efficiency and requires calculation of the SAP and a Carbon Index; L1 covers homes and L2 non-domestic dwellings.
Carbon Trading	The exchange of permits to emit CO <sub>2</sub> by large organisations, generally on a public exchange such as the IPE in London. Under the EU Emissions Trading Scheme (ETS), each country creates a National Allocation Plan, which is then split between sectors and the largest firms in those sectors. Companies that make CO <sub>2</sub> savings in excess of their requirements can sell permits or companies that have failed to meet their targets, thereby allowing least-cost reductions to the overall limit.
Climate Change	A process of changes to weather patterns and temperatures largely caused by the emissions of certain "greenhouse gases" by mankind, principally associated with burning fossil fuels (qv).
Climate Change Levy	A levy imposed on non-domestic users of gas and electricity since 1.4.2001 and collected by utilities on behalf of HM Customs & Revenue. Organisations can claim exemption from the Levy for electricity from Renewables or Good Quality CHP.
CO <sub>2</sub>	Carbon Dioxide, the main greenhouse gas, formed by the combustion of all fossil fuels.
Co-firing	The inclusion of proportion of biomass alongside coal being burnt in a power station.
Combined Heat & Power	Unlike conventional methods of electricity generation, a plant in which some of the waste heat generated is used for industrial processes or heating and hot water in buildings. The heat used in this way displaces heat that would otherwise have to be supplied by burning additional fuel and so leads directly to a reduction in emissions.
Community Heating	Residential Community Heating (RCH) is the centralised supply of heat, for space heating and domestic hot water.
EcoHomes	The version of the Building Research Establishment Environmental Assessment Method used for domestic dwellings. Assessment can be at four levels, and is sometimes used to set standards for new developments. Includes credits for carbon emissions, renewable energy and other factors.

Energy Action Plan	A route map offering local authorities and others a clear and cost-effective way of reducing energy consumption and associated CO <sub>2</sub> emissions.
Energy Conservation	The reduction of energy consumed, usually by changing habits or patterns of use, and not requiring significant financial investment.
Energy Efficiency	The creation of greater utility (more heat, light or power) for each unit of energy consumed; typically requiring investment (eg. in better designed equipment or through adding insulation to buildings).
Energy Performance of Buildings Directive	EU Directive that will require energy labelling of buildings at time of change of ownership or tenure, with more regular and public reporting for public buildings.
Energy Saving Trust	An independent Government-funded company working to increase energy efficiency, principally in the domestic and transport sectors.
Fossil Fuels	Fuel sources created from fossil remains of plants stored underground for millions of years, and now extracted. The principal fossil fuels are coal, oil and natural gas. All fossil fuels produce carbon dioxide (and water) when burnt, and so contribute to global climate change.
Fuel Poverty	A household suffering from fuel poverty cannot afford to heat its home to an adequate level without using an excessive level (above 10%) of household income.
Greenhouse Gases	The six main gases contributing to Global Climate Change (qv). So called because they collect in the upper atmosphere and prevent some of the energy from being re-transmitted into space, analogously with the way that glass in a greenhouse traps in solar energy. The gases are, in order of global impact, carbon dioxide (CO <sub>2</sub> ), methane (CH <sub>4</sub> ), nitrous oxide (N <sub>2</sub> O), hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride (SF <sub>6</sub> ).
Ground Source Heat Pump	A device used to extract low-grade heat stored in the ground (and replenished by the sun shining on its surface) and used to heat water, typically for use in central heating systems.
Kyoto Protocol	International conference (1996) leading to agreement and Protocol requiring signatories (industrialised countries only) to commit themselves to reducing CO <sub>2</sub> emissions by defined percentage levels over the period 1990-2010/12. The UK should meet its Kyoto commitments; most other countries will not.
Micro- generation	Very small scale power generation schemes, typically at the level of a single household or office building.
National Home Energy Rating Scheme (NHER)	The UK's first domestic energy label, rating homes on a scale from 0 to 10. Based on BREDEM, the NHER is an energy-cost index that (unlike SAP) takes into account location factors (shelter, orientation, region) and lights and is widely used as a tool to combat fuel poverty.
Offshore	Location for a number of prospective renewable energy sources, including wind (already cost-effective), tidal energy and wave energy. Hampered by high costs, but likely to become increasingly important for coastal communities.

Ofgem	The Government's Office for Global Energy Markets, regulates the gas and electricity industries as well as overseeing BETTA and the Energy Efficiency Commitment.
Photovoltaics	A means of direct electricity generation from the sun (or bright daylight). PV is generally based on silicon technology, either in crystalline or amorphous form, arranged as cells linked into modules, arranged as an array. One of the cleanest forms of energy, it suffers from a high capital cost.
Renewable Energy	Collective terms (or renewables) for energy from natural unlimited sources. Generally taken to include wind, solar thermal, solar electric (PV), hydro-power, wave, tidal, biomass, biofuels, and ground source heat pumps. Energy from Waste is not generally regarded as renewable, although there is an area of overlap, for example in straw as a by-product of grain from food.
Renewables Obligation	The Renewables Obligation is the Government's main mechanism for supporting renewable energy. Introduced in April 2002, it requires licensed electricity suppliers to source specified percentages of the electricity they supply from renewable sources, set to increase each year from its current level of 4.9 per cent in 2004/05 to 10.4 per cent by 2010/11 and to reach 15.4 per cent by 2015/16.
SAP, the Standard Assessment Procedure	The Government's way of calculating the energy performance of dwellings, reported on a scale of 1-120 (SAP2001, soon to be replaced by a 1-100 scale in SAP2005). SAP ratings are required to be displayed on all new dwellings and provide one way of demonstrating compliance with Part L1 of Building Regulations.
Small-scale Hydro	Hydro-electric power that typically produces no more electricity than that used by a single building or small community, and may be retrofitted into an old mill run, or similar. Unlike large scale hydro developments, does not suffer from a need to flood land for new reservoirs.
Solar Water Heating	Use of the sun's energy to provide domestic hot water, pre-heating for industrial use or swimming pool heating. Solar heating is also used less commonly for space heating or cooling (through absorption units).
Watt	SI unit of power; energy = power x time. As the Watt is a small unit, power station capacities (including renewable sources) are usually expressed in MW (million Watts) or kW. The suffix p is used to show peak output of variable renewable generators, so that a domestic PV array may be quoted as having an output of 5kW <sub>p</sub> . For sources such as CHP or solar thermal, the suffixes e for electric output and for thermal output may be used.
Zone of Visual Influence	The area from which a development is potentially visible as determined by topography and other intervening features on the ground.