In the zone

EcoConsulting looks at another important section of EcoHomes: Pollution.

Lee Valley Housing Association wins Worcester Bosch Environment 2010 Award and has installed the company's 30HE boiler systems into its properties in Lee Park and Hartsbourne. (Pictured l-r: David Kelly, Jim Tattan from contractors Mitie Engineering, tenant Agnes Dixon and Stuart Wilcock, Worcester's specification manager.)

Pol 1: Insulant ODP and GWP

Credit Background: Some insulation materials used in the construction industry contain blowing agents that can have a long-term harmful effect on the earth's ozone layer, or have a sizeable global warming potential (GWP). Examples of such blowing substances are CFCs, HCFCs, and HFCs. Currently, the use of CFCs has been banned, while HCFCs are being phased out in the European Community. However, HCFCs are often replaced by HFCs, which have a high GWP.

EcoHomes rewards the usage of insulation that has Zero Ozone Depletion Potential (ZODP) as well as a low GWP of less than five.

Credit Benefits: Reduced impact on climate change; lower incidence of skin cancers related to ozone layer holes.

Credit Requirements: One credit is available for specifying insulating materials that have no ozone depleting potential and a GWP of less than five – whether in their manufacturing process or composition. This requirement covers the insulation of the roofs, loft access, walls, doors and lintels, floors and foundations, hot water cylinders and other thermal stores, and pipes.

Pol 2: NOx Emissions

Credit Background: Burners used in domestic heating systems, such as gas boilers, constitute a major source of nitrous oxides (NOx) emissions. NOx arise when burning fossil fuels, and are a factor of global warming, acid rain, as well as ozone formation – a grave pollutant and irritant at low atmospheric level. Although electric heating systems do not produce NOx in houses, power stations that produce the required electricity emit considerable amounts of NOx in the upper atmosphere.

A broad range of gas boilers is available on the market, with various levels of NOx arising per unit of energy produced. EcoHomes encourages the specification of low-NOx boilers or heating systems. High efficiency gas condensing boilers usually have low NOx levels, and simultaneously obtain Ene 1 energy credits (as discussed in March).

Credit Benefits: Lower impact on climate change and global pollution; reduction of internal air pollution in houses with related health benefits.

Credit Requirements: Up to three credits are available depending on the choice of heating system. For gas boilers, the number of credits is determined by the boiler class or the dry NOx quantity emitted, as described in the table below. Electric heaters cannot obtain any credits since they are large NOx producers at source. Additional credits may be obtained if the electricity or hot water is supplied by a renewable energy source, such as PVs or solar heating panels.

Number of Pol 2 Credits	Dry NOx level (mg/kWh)	Boiler Class
1	<=150	3
2	<=100	4
3	<=70	5

Pol 1: Ease of compliance		
EASY ✔	MODERATE	COMPLEX

Pol 2: Ease of compliance		
EASY	MODERATE ✔	COMPLEX

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