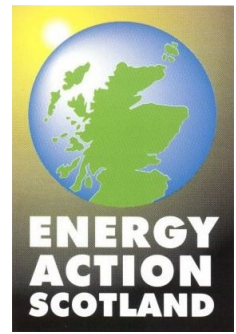


# Energy Action Scotland Response to the Royal Society of Edinburgh Enquiry into Energy



Energy Action Scotland (EAS) is the Scottish charity working to eradicate fuel poverty and provide warm, dry affordable to heat homes for all living in Scotland. EAS has no fixed view or standpoint on either the energy supply or mix required to provide affordable warmth. However, EAS does believe that homes should be at a level of thermal efficiency where the total amount of energy required to achieve affordable warmth and so prevent fuel poverty is at a minimum. This will reduce the overall energy demand and generating requirement of the country and so reduce carbon and other greenhouse gas emissions. This in turn should reduce the need to import fuel from other countries with a less stable environment and reduce the need to build additional generating plant.

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EAS believes that fuel poverty is the consequence of three main parts, the thermal efficiency of the home, the cost of energy and the disposable income of the householder. The first part of the fuel poverty, the thermal efficiency of the home, is within the remit of the Scottish Parliament and it's Executive. The level of thermal efficiency is directly linked to the overall energy requirement of the home to provide affordable warmth. The World Health Organisation (WHO) and others described the necessary internal air temperature of a home to provide a safe and comfortable living environment to be 21°C in the living room and 18°C in all other areas for a period of 9 hours per week day (2 hours in the morning and 7 hours in the evening) for ordinary households and 16 hours per day each weekend day. This rises to 23°C in the living room and 18°C in all other areas for 16 hours per day 7 days per week for elderly or vulnerable households. If this can be achieved for less than 10% of disposable income this can then be described as achieving affordable warmth.

The better or greater the thermal efficiency of any individual house the easier it will be to achieve this state of affordable warmth. EAS believes that a good measure of thermal efficiency is the National Home Energy Rating programme (NHER). The NHER rates homes on a scale of 0 – 10, 0 being least efficient. The NHER unlike other energy measurement programmes e.g. the Standard Assessment Procedure (SAP) takes into account all energy used within the home for heating, lighting, appliance use and so on.

To reduce the overall energy use of a home will increase the NHER score, move towards providing affordable warmth, reduce the amount of money spend by the householder and reduce the need for energy from a fuel supplier. This will ultimately lead to the reduced demand from the generator or gas supplier.

EAS is therefore working with the Scottish Parliament and the Scottish Executive to design programmes that aim to tackle fuel poverty by making the home more energy efficient and reducing the amount of fuel required to achieve affordable warmth.

EAS believes these fuel poverty programmes are even more important in the current climate of rising fuel process in what can best be described as a volatile energy market. EAS believes that to reduce further energy demand within Scotland additional energy efficiency and fuel poverty programmes are required or that the current programmes are significantly revised to provide additional measures.

The overall efficiency of Scotland's housing stock is measured by the Scottish House Condition Survey (SHCS). The last large scale survey was conducted in 2002. This showed that the overall efficiency of the stock had risen from 4.3 in 1996 to 5.4 in 2002. EAS believes that to achieve affordable warmth an all Scottish average NHER 7 would be required. The 2002 SHCS calculated that there were 286,000 fuel poor households in Scotland. This figure had been reduced from 738,000 from the 1996 SHCS. The reduction had largely (49%) been due to increased levels of household income, 35% of the reduction had been achieved by falling fuel prices and only 15% had been as a direct result of the introduction of energy efficiency measures. It is also calculated that for every 5% rise in energy prices 30,000 households will be taken back into fuel poverty. One supplier has applied prices rises of 36% in fuel since 2002; others have applied similar prices increases which have resulted in 140,000 households being taken back into fuel poverty since 2002.

To achieve the average of 7 will require a steep change in the levels of activities of the current energy efficiency programmes and also require that they increase the range of measures they provide. EAS is suggesting that measures such as small scale renewables, microwind, solar water heater, photo voltaic roofs, air and ground source heat pumps along with both internal dry lining and external cladding will be required.

The Scottish Parliament and Ministers have, like other devolved administering and the Westminster Government, agreed that fuel poverty should be eradicated, as far as is reasonable practicable, by 2016. If this is achieved and an average NHER is also achieved the social consequences for the Scottish public will be great. There should be a warm, dry, affordable to heat home for everyone, the demand for energy should be reduced considerably and significant health benefits, as yet undefined, may be seen.

In summary, EAS believes that there is a requirement to ramp up the levels of activity and financial resources of the current Scottish fuel poverty and energy efficiency programmes if fuel poverty is to be eradicated by 2016. A more sustainable removal of homes from fuel poverty can only be achieved by increasing the thermal efficiency of the home and reducing the overall requirement for energy.