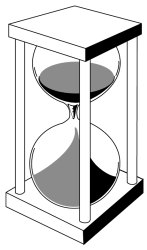
Friends of the Earth Scotland



Association for the Conservation of Energy

Energy Efficiency briefing : Friends of the Earth Scotland and the Association for the Conservation of Energy

Why energy efficiency?

- **To help meet greenhouse gas emission targets :** The UK target under the Kyoto protocol is to reduce its greenhouse gas emissions by 12.5% below base years by 2008-2012. In addition the UK Government has set a more ambitious domestic goal to reduce its CO2 emissions by 20% by 2010 and has pledged in its Energy White Paper to put the UK on a path to a 60% reduction in CO2 emissions by 2050, with real progress by 2020. Since 80% of greenhouse gases are directly the result of energy use (including transport), reducing emissions significantly will therefore inevitably require action within the energy system. Half of the Kyoto reductions and Energy White Paper reductions are expected to come from energy efficiency improvements. Savings of this kind of magnitude would require a doubling of the rate of improvement seen in the last thirty years. All of the possible scenarios for a low carbon future outlined by the PIU require the prioritisation of energy efficiency.
- **Makes environmental, social and economic sense :** reducing energy demand cuts all the emissions associated with energy. On a social level, without greater energy efficiency the eradication of fuel poverty would involve substantial increases in energy consumption and CO2 emissions. To the extent that it is cost effective, energy efficiency and conservation contribute to improved economic efficiency, reduce household energy bills, and improve business competitiveness. Manufacturing and installing energy efficiency measures creates more jobs than supplying the energy in the first place. Reducing energy consumption enhances energy security and is flexible.
- **Not a compromise :** Over the last 30 years the economy has doubled in size while energy use has barely increased. The cheapest, cleanest and safest way of meeting energy needs is to use less energy.
- **Very cost effective :** costs per tonne of carbon are either negative (since there are net resource savings) or low.

What is the potential?

- **Overall :** The UK Governnment Performance and Innovation Unit(PIU) estimated that the current cost effective potential for energy efficiency is approximately 30% of final demand. Many industrialized nations have far better energy intensities (ratio of energy consumption to GDP) than the UK. In a league table of the "top 20" OECD countries the UK came in at 14th.
- It is estimated that £13bn of energy is wasted each year in the UK. In Scottish terms this translates to circa £1.3bn lost annually to the economy.
- **Buildings :** In the UK energy use in buildings accounts for 46% of CO2 emissions. 8% of the Scottish housing stock has a "poor" energy rating.
- **Residential sector :** The residential sector accounts for about 27% of UK CO2 emissions by final user.
- **Commercial sector :** Commercial sector energy use is growing fast, having risen by almost 70% since 1973, and is projected to grow faster than any other sector under business as usual other than transport.

What needs to be done?

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While responsibility for energy policy in Great Britain in reserved to the DTI, a number of areas relating to energy policy are devolved, including environment policy, promotion of energy efficiency, support for innovation, housing, building regulations, and planning. There are many initiatives going on to improve energy efficiency in Scotland at present. FoES / ACE believe that this is still not enough, and the following changes need to be made to lead us to a step change in energy efficiency.

- **Targets** : Sectoral targets for energy efficiency improvements need to be set across the Scottish economy: for residential, commercial, industrial and public sectors. These would provide greater impetus for energy conservation, complement those set for renewable energy development, and provide the certainty necessary for future investment and innovation by the energy efficiency industry. The Northern Irish Office has just set an ambitious target of a 1% per annum reduction in electricity demand between 2007 and 2012. As a first step, a target should be set for domestic energy efficiency: we propose the PIU's recommended target of a 20% improvement in efficiency by 2010 and a further 20% by 2020. This is double the current rate of improvement. Yet the gains in terms of energy savings could reach about 0.25% of GDP by 2020, over and above the cost of the investment needed to unlock these savings. England has recently legislated through their Housing Act for a 20% improvement in residential energy efficiency by 2010 on 2000 base year levels. National targets should be reflected in mandatory local authority targets. Again in England, the Sustainable Energy Act provides the Government with powers to give such "energy efficiency directions" to local authorities. The PIU supported targets being set in all sectors of the economy on the basis that "targets can be useful for signalling long term Government intentions to the market, even if not backed up by specific measures from the outset....They provide an obvious means of focussing both policy makers' and market participants' attention on areas where new policy measures may be required or existing ones adjusted.....the sensitivity (to back-tracking on targets) contributes a lot to the confidence enhancing quality of targets, which is necessary if they are to have any impact at all on behaviour."

- **Energy Efficiency strategy** : the energy efficiency strategy currently being developed should take the opportunity to review how successful current initiatives have been at reducing energy consumption, and target future resources on the basis of this. Effective initiatives should be extended and greater resources provided to them. Many energy efficiency policy instruments and schemes have been introduced in recent years. In many cases the priority is to evaluate their progress and to enhance them with new resources, rather than seek new and different approaches. The strategy should also strive to be ambitious in its strategy, and not simply restate what is currently going on in the sector – something that has been a weakness in energy efficiency strategies in other constituent parts of the UK.

- **Organisational :** The delivery of energy efficiency is fragmented, both at national and local levels, with many different bodies responsible for different aspects of energy efficiency, and spread across a wide range of departments. Staff employed in writing the energy efficiency strategy should be retained within a small unit tasked with overseeing the implementation of the strategy across different Scottish Executive departments. At a local level FoES / ACE support the work being carried out by the EST into Sustainable Energy Centres : centres which it is hoped will be able in future to provide the public with one stop shops on energy advice of all manners.

- **Review of existing energy efficiency legislation :** The principal piece of legislation on the statute book in Scotland relating to energy efficiency is the Home Energy Conservation Act. This Act should be reviewed at its current half way stage since most local authorities are failing to meet both the original and renegotiated (mainly reduced) aspirational targets which the Act set. This review must assess the resources and powers available to meet these targets, and the priority which local authorities give to home energy conservation. In England the Sustainable Energy Act gave the Government powers to change local authority targets and make them mandatory : the Scottish Executive should consider using the forthcoming Private Housing Bill to obtain such powers for themselves. It might become appropriate to require local authorities to write energy efficiency strategies of their own and to have to report on these. Such a report could include information contained in current reports which they provide such as on HECA and fuel poverty. Local authorities should be required to appoint an energy efficiency officer.

- **Ambitious approach to current or future proposals :** The Executive should be ambitious rather than minimalist in the implementation of outside initiatives, such as the current EU Energy Performance in Buildings Directive. The EU Directive on the Energy Performance of Buildings requires, among other aspects, that whenever a building is constructed, sold, or rented out, a certificate detailing its energy performance must be made available. The aim of the Directive is to improve awareness of energy use in buildings, and thereby

encourage investment in energy saving. In order to facilitate comparison between buildings the certificate must include reference values and must also include recommendations for cost effective changes to improve energy performance. The Directive must be in place in member states by 4 January 2006. Member states have the option, however, of derogating the Directive for three years if they believe there are insufficient qualified or accredited experts (in the whole of Europe) to carry out the certification. Despite the fact that the Directive needs to be in place in member states by January next year we are still to see details of any firm plans as to how the Executive will implement these requirements. We are highly concerned that the energy certification requirements will be derogated since we believe that this will delay rather than resolve the issue : it is highly unlikely that people will undergo or establish training until there is a job for them to do. The Scottish Executive has been aware of the Directive for several years now and has not brought forward means to resolve the training issue. A second issue regards the displaying of the certificates. The Directive requires that "public buildings" should display the certificates in a prominent location, yet goes on to define public buildings differently in two different places of the Directive; as buildings visited regularly by the public and the more traditional definition of public buildings. We understand that the intention was that it should apply widely, and the Scottish Executive if it is genuine about improving energy efficiency in the commercial sector should take this wider approach. We would also like to see the introduction of sanctions for breach of the energy certification requirements (eg similar with the fines associated with failing to tax or insure your car) and a means of gathering and recording energy certification information on a local authority and national basis. The latter would provide far more accurate and extensive information on the Scottish housing stock, particularly private housing, and enable the adaptation of policies on the basis of this.

- **Building standards :** The current Part J of the Building Standards require some of the most demanding levels of thermal insulation for building fabric in the UK, and have more recently included minimum requirements on services like boiler and lighting efficiency. The next review of Building Regulations, due in 2007, should take the opportunity specifically to extend building regulations to refurbishments in a more meaningful way, and to incorporate renewable generation technologies. 9/10 houses fail to meet current new build building standards, and at the current rate of building it will take 100 years until the Scottish Housing Stock is up to the current standard for new build. The average SAP of existing houses is 45, and of new build 95. The aim should be for building standards to be repeatedly strengthened to encourage housebuilders to develop low, or even zero, carbon homes. Studies have shown that there is also a need for better training of builders installing insulation since much insulation is being installed to a sub standard.

- **Step change in attitudes :** Policies need to focus more on changing peoples' behaviour. What current policies have failed to do is create generalised market demand for energy efficiency. The EPBD will help – its labelling requirements will provide a similar enabling mechanism for market transformation in buildings as the energy label has provided for appliances. The necessary technologies are out there, but need to be taken up to a greater extent. The barriers to take up of energy efficiency measures need to be given greater attention and solutions sought.

  The current system of remote production / generation of cheap energy means people are very unaware of the amount or source of energy they use. Offering people a choice between a range of locally based power / heat providers and requiring that a certain proportion of energy demand was met from local sources would bring the link between energy use and production much closer to people's consciousness. Similarly, offering people a choice between more local power / fuel production and greater investment in energy efficiency could overcome unwillingness to invest in "unseen" efficiency improvements. The EST notes that "energy efficiency is quite low down peoples' list of priorities". Carbon Trust research showed that the achievement of a low carbon economy does not need any spectacular scientific breakthroughs, they showed that the knowledge and techniques have been around for over 20 years, but there is still a long way to go before they are accepted practice or are applied in practice. Major energy users have the incentive to save energy, but where energy is a small part of an individual's or firm's budget the opportunities are often ignored, partly because there are risks and bother involved in making the necessary investments. For the vast majority of energy users, energy is a small fraction of total costs and in a complex world, both households and businesses have higher priorities. They do not seek to maximise the economic efficiency with which they use energy. Programmes need to be developed to encourage greater involvement at the household or business level.

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