

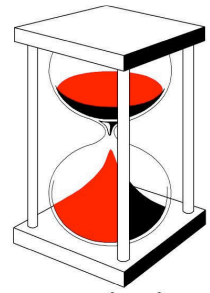


**Friends of
the Earth
Scotland**

**Friends of the Earth Scotland and
Association for the Conservation of Energy
Policy Briefing Paper**

Energy

17 January 2008



**Association
for the
Conservation
of Energy**

1. Introduction

Friends of the Earth Scotland and the Association for the Conservation of Energy welcome the opportunity to comment ahead of the Scottish Government debate on Energy on Thursday 14 January 2008. This briefing sets out some of our key priorities for energy policy.

2. Energy conservation as top priority

2.1. The negawatt is cheaper than the megawatt

The cheapest unit of energy is the unit you don't use. This may sound like a cliché, but evidence shows it to be true. A National Audit Office report on an electricity-only saving scheme for residential customers, run by the 14 local energy companies in Britain concluded that the cost of electricity saved was **1.8p per kWh¹**. This compares with the average price for domestic customers on direct debit at **10.58p per kWh²**. In December 2003, the European Commission published its draft directive on 'Energy End-Use Efficiency and Energy Services'³, to "promote good practice in energy efficiency'. Para 1.1 states that 'it is estimated today that the average cost in Member States of saving a unit of electricity in the domestic sector is around 2.6 Euro cents [**1.8p**]⁴ per kWh, compared to the average off-peak price for delivered electricity of 3.9 Euro-cents [**2.7p**] per kWh and on-peak price of 10.2 Euro-cents [**7p**] per kWh."

2.2. Existing and future Scottish energy conservation measures

We are grateful that the SNP Government recognises the primary importance which must be attached to energy conservation⁵. We also welcome many current and ongoing Scottish energy conservation measures, in particular the announcements in the recent Sullivan report for **Scandinavian standards of energy efficiency in our homes by 2010**. To put this aim in context, the most recent change in Scottish regulations, introduced on 1 May 2007, are still not up to the standard introduced in Sweden in 1978⁶. To catch up from being 30 years behind is ambitious, but we will support any Government that attempts it.

However, we are still concerned at the lack of a Scottish energy efficiency strategy, several years after it was initially promised. And while the Sullivan report set out ambitious but realistic energy conservation goals for new homes, these represent only 1% of our housing stock each year. A **Scottish strategy to tackle energy efficiency in the existing stock**, including measures to ensure the 2010 and 2016 fuel poverty targets are reached, is vitally important.

It is also essential that Government lead by example. One way to do this would be to **procure only buildings in the top quartile of energy performance**. The UK Government has pledged to do this⁷. We hope the Scottish Government will not be out-done by Westminster in this regard.

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3. Nuclear is not the answer

3.1. Nuclear will hinder action on climate change

There is considerable debate surrounding whether nuclear energy is carbon neutral. This is often disputed. Three factors are important; the massive amount of energy needed for the steel and concrete during construction, the energy (obtained from fossil fuels) used to mine and process uranium and the ongoing energy used during decommissioning and the maintenance of waste stores^{8 9}. Research carried out for the European Union which looked at the overall impact of building and operating reactors concluded that **nuclear power stations produce around 50% more greenhouse gas emissions than wind power**¹⁰. An expansion in the global nuclear industry might also precipitate the need to use lower quality uranium ores, making processing even more carbon intensive. Even if some carbon emissions reductions could be achieved these could be delivered more quickly and more cost effectively via energy efficiency and the expansion of generation from renewables¹¹. The Westminster's Environment Audit Committee concluded, "*It is abundantly clear that new nuclear build is not the only option for lower-carbon electricity generation*"¹².

3.2. Nuclear makes only a limited contribution to meeting our energy needs

Nuclear power can only be used to produce electricity, whilst two thirds of the energy generated is waste heat¹³. Oil and gas used to power transport and heat homes accounts for 81% of energy use in Scotland¹⁴, therefore nuclear can only make a marginal difference to our overall energy needs. The UK would also be increasingly reliant on imported uranium. For this reason it would be quicker and more cost effective to reduce energy wastage through energy conservation and investment in renewables¹⁵, rather than invest in expensive nuclear stations, the first of which would not be ready for at least 10 years at best, whilst replacing all today's stations would take much longer¹⁶.

4. Conclusion

Scotland's energy needs can be met through a mixture of ambitious energy conservation measures and renewable generation. We do not need the expensive, dangerous white elephant of nuclear power. Friends of the Earth Scotland and the Association for the Conservation of Energy will continue to support the Scottish Government in its efforts to pursue conservation and clean energy.

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¹ National Audit Office (31 July 1998)

² Department for Business, Enterprise & Regulatory Reform, (2007) Quarterly Energy Prices: December 2007, table 2.2.3
<http://www.berr.gov.uk/files/file43302.pdf>

³ European Commission (2003) *Proposal for a Directive on the promotion of End-use efficiency and Energy Services (COM (2003) 739)*. Brussels
⁴ €1 = £0.689

⁵ In the Energy White Paper debate on 27 May 2007, Mike Weir MP stated, "We believe that energy efficiency should be given the highest priority." See <http://www.publications.parliament.uk/pa/cm200607/cmhansrd/cm070523/debtext/70523-0006.htm#07052360001565>

⁶ Backstop U-values required in domestic buildings in Scotland are now 0.3, 0.25 and 0.2 W/m²K in walls, floors and roofs respectively (Scottish Building Standards Agency (2007) Domestic Technical Handbook). In Sweden in 1978, the corresponding values were 0.3, 0.2 and 0.2 W/m²K respectively. (Energy Advisory Associates (2001) Building in ignorance, demolishing complacency: improving the performance of 21st century homes <http://www.ukace.org/pubs/reportfo/BuildIgn.pdf>)

⁷ Defra (2004) Energy Efficiency – The Government's Plan of Action

⁸ Mark Diesendorf (2005) Can nuclear energy reduce CO₂ emissions? Australasian Science, July 2005, pp. 39-40.

⁹ Van Leeuwen J and Smith P (2005) Nuclear Power: the Energy Balance, www.stormsmith.nl/

¹⁰ AEA Technology (1998) "Power Generation and the Environment." A UK perspective. Vol 1

¹¹ Lovins A (2005) Nuclear power, economics and climate protection potential, Rocky Mountain Institute, September 2005

¹² Ibid House of Commons (2006)

¹³ Ibid. House of Commons (2006)

¹⁴ AEA Technology (2006) Scottish Energy Study: Summary Report, Vol. 1 & 2, Scottish Executive

¹⁵ Guardian Report January 2007, Nuclear Power Can Not Tackle Climate Change

¹⁶ BNFL Commercial (2005) Activities to underpin a predictable timeline for replacement nuclear build