



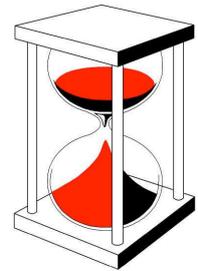
**Friends of  
the Earth  
Scotland**

**Friends of the Earth Scotland**

**and the**

**Association for the Conservation of Energy**

**Parliamentary briefing:  
Energy standards in building regulations**



**Association  
for the  
Conservation  
of Energy**

#### **Summary:**

- **Around 50 per cent of UK greenhouse gas emissions are caused by the construction, occupation and maintenance of buildings<sup>1</sup>.**
- **Reducing emissions from buildings can also reduce fuel poverty and improve business competitiveness.**
- **Proposals for an 18-28% reduction in CO<sub>2</sub> emissions from new buildings through energy standards are welcome, but may not be achieved in practice unless compliance is improved.**
- **Evidence suggests that 43% of new houses do not comply with existing energy standards in building regulations<sup>2</sup>. Scotland-wide research into compliance is urgently needed.**
- **The inclusion of compulsory random air-tightness testing, as already applies in England, would have greatly boosted compliance levels. This is a major omission from the amended Scottish regulations.**
- **Future amendments to building regulations must ensure that the energy performance of existing buildings are improved on extension or renovation through ‘consequential improvements’.**

#### **Introduction**

Friends of the Earth Scotland (FoES) and the Association for the Conservation of Energy (ACE) welcome proposed improvements in energy standards in the Building (Scotland) Amendment Regulations 2006. However, we believe more must be done to reduce emissions from buildings, and it is vital that regulations are complied with if they are to have any worth whatsoever. There is strong evidence that energy regulations are not properly complied with.

#### **Fuel poverty and climate change**

Building energy efficient buildings can not only deliver reduced CO<sub>2</sub> emissions, it can also help deliver fuel poverty targets (in the domestic sector) and improve business profitability (in the non-domestic sector). While fuel poverty figures fell in Scotland from 35% of households in 1996 to around 13% of households in 2002<sup>3</sup>, the latest estimates put the number of fuel poor households in Scotland at around 650,000, while children’s charities estimate that 90,000 children in Scotland suffer from fuel poverty. Likewise, business costs can be reduced through more energy efficient buildings: £1.3bn is thought to be lost to the Scottish economy every year through wasted energy<sup>4</sup> – much of this through inefficient buildings.

#### **Target reductions welcome but may not be achieved in practice**

We welcome the aim of reducing CO<sub>2</sub> emissions from new buildings by between 18% and 25% for domestic, and between 23% and 28% for non-domestic compared to current regulations. However, we are concerned both that these targets are insufficiently ambitious,

<sup>1</sup> Speech by Elliot Morley, 3 April 2006 <http://www.defra.gov.uk/corporate/ministers/speeches/em060403a.htm>

<sup>2</sup> “Assessment of energy efficiency impact of Building Regulations compliance”, Brown M (2004), Building Research Establishment

<sup>3</sup> “Scottish House Condition Survey 2002”, Communities Scotland (2003)

<sup>4</sup> Scottish Executive press release, 7 December 2004 <http://www.scotland.gov.uk/News/Releases/2004/12/071102348>

and that they may not be achieved in practice. In order to achieve a reduction in emissions from *all* buildings (including existing buildings) of 60% by 2050, in line with government targets, far higher standards are needed. The leading academic study on this subject suggests that new buildings should have zero or very low space heating demand by 2020 at the latest<sup>5</sup>, and many thousands of German homes have already been built to this standard<sup>6</sup>. The Scottish targets do not compare favourably with Denmark, where a house built to the latest standards in 2003 consumed 20% less energy than its equivalent in the UK<sup>7</sup>. Since then, Danish standards have risen by a further 25%. In addition, most of the proposed energy standards apply only to new buildings, which are estimated to represent 1% of the housing stock per year. If we are to tackle existing buildings, then energy standards must also apply to extensions and renovations, through a process of ‘consequential improvements’, as is being considered in England<sup>8</sup>.

### **Compliance**

Setting ambitious targets for improvements in energy regulations is pointless if the standards are not complied with. Studies conducted in England and Wales suggest that as many as 43% of new houses do not comply<sup>9</sup>. A recent survey in Aberdeen, admittedly with a small sample but nonetheless representative of the housing estate concerned, found that none of the houses sampled complied with regulations at the time they were built<sup>10</sup>.

We are deeply disappointed that the Scottish Building Standards Agency has not included compulsory random air-tightness testing in the current amended standards, which would have greatly improved compliance rates. This already applies to the English standards, and we see no reason why it cannot also be introduced in Scotland.

In addition, it is vital that Scotland-wide research is urgently commissioned to determine whether on-site compliance with regulations is indeed as poor as the Aberdeen study and the England and Wales study would suggest.

### **Conclusion**

Reducing emissions from Scotland’s buildings has knock-on benefits in combatting fuel poverty and improving business efficiency. The Building (Scotland) Amendment Regulations 2006 will help to achieve those benefits only if compliance is improved.

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<sup>5</sup> “40% house”, (2005) Environmental Change Institute, University of Oxford p. 38

<sup>6</sup> See <http://www.passiv.de/> or <http://www.passivhaus-info.de/> for more information

<sup>7</sup> “Our Energy Future – creating a low carbon economy” (2003), DTI, p.38

<sup>8</sup> See <http://www.ukace.org/pubs/articles/eibi2006-02.pdf> for further info.

<sup>9</sup> “Assessment of energy efficiency impact of Building Regulations compliance”, *ibid*

<sup>10</sup> “Thermal performance of new housing in the Aberdeen area”, BRE (2004)