Energy Efficiency Commitment 2005-2008
Innovative Action

Submission by the
ENERGY SAVING TRUST
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This is the response of the Energy Saving Trust (EST) to Ofgem's consultation 'Energy Efficiency Commitment 2005-2008, Innovative Action' issued in April 2005. This response should not be taken as representing the views of individual Trust members.

EST welcomes the opportunity to input into the way innovative action is assessed under the Electricity and Gas (Energy Efficiency Obligations) Order 2004. The focus of our response is on the thresholds stipulated for demonstrating a significantly greater improvement in energy efficiency compared to similar actions under EEC 2002-2005. However, before commenting on the specifics on the consultation we would first of all like highlight a number of more general points:

1) The Defra/HM-Treasury Energy Efficiency Innovation Review (EEIR)
The 2004 Pre-budget report announced that Defra and HM-Treasury would jointly be undertaking an Energy Efficiency Innovation Review '*to examine how technological, policy, financial and organisation innovation, whether by Government, business or consumers, can best contribute to a longer-term step-change in energy efficiency*'. This review is now well underway and a technology assessment which identifies key innovative energy efficiency technologies that have the potential to generate both additional carbon savings and economic benefits for the UK is now complete. This work covers all technologies associated with buildings and appliances, except technologies supplying the grid, and is restricted to those not yet commercially available. In the context of this consultation the results of this work are likely to be of interest to Ofgem and could help inform Ofgem's views on how innovative action is assessed under the Order, and relevant thresholds. As such **EST believes that Ofgem's proposals must take account of the outcomes of the EEIR.**

2) micro CHP
EST believes that Ofgem must be more specific about how micro CHP will be treated under the order. The consultation document reiterates Defra's statement that 'the Government supports the development of new energy efficient technologies and proposes an incentive for innovative products including micro-CHP units with a maximum electrical capacity of up to 50kWe'. However, there are no further details or opportunities for consultation about how micro CHP will be treated for the purposes of the uplift. **As such EST believes that Ofgem should specify how micro CHP will be treated under the order.**

EST believes that the qualification of micro CHP units for uplift under EEC should be subject to the results of the small scale CHP field trials and laboratory tests based on PAS67 and associated modelling work. However, given the timescales of the trials EST does not believe it would be sensible or in the interests of market transformation to wait until the field trials are completed in their entirety before qualifying micro CHP units. Rather, because data on the performance of some units will be available before that of others **EST believes that decisions on the qualification of units should be subject to particular units performing well in the field trials and the laboratory tests and associated modelling work, and undertaken on a model by model basis**.

3) Actions not considered in the consultation document

There are a number of types of action not included in the consultation document that EST believes could warrant an uplift under the Order. In particular, EST believes that EER endorsed glazing products should qualify for uplift under EEC, and that given the well recognised need for better billing and data provision to consumers Ofgem should commit to considering an uplift for the replacement of standard meters with Smart Meters once suitable savings figures have been determined for this technology. In addition, Ofgem may wish to consider whether it would be appropriate to allow the qualification of EER endorsed brown goods. **In short, EST believes that the inclusion of actions not listed in the consultation document warrants further debate and would welcome the opportunity to discuss this in further detail with Ofgem**.

The remainder of our response deals with the thresholds stipulated for demonstrating a significantly greater improvement in energy efficiency compared to similar actions under EEC 2002-2005, and deals only with areas where we make alternative proposals or seek clarification.

Loft Insulation

EST broadly agrees that it will be very unlikely that it will be possible to demonstrate a significantly greater improvement in energy efficiency with respect to loft insulation. However, new insulation technologies are being considered under the EEIR and as such any decision on the inclusion of loft insulation for an uplift should be based on the results of the EEIR.

Cavity Wall Insulation

EST is aware of a new retrofit CWI product that can deliver a lambda value or thermal conductivity of 0.025 W/mK. We do not know if its use is suitable for all applications. However, it does demonstrate that there is scope for further efficiencies in CWI. As such **EST believes that a 20% improvement in energy efficiency for CWI to demonstrate a significantly greater improvement in energy efficiency is challenging but potentially achievable over the period of EEC 2005-2008**.

Radiator Panels

EST is aware that there have been several tests undertaken on radiator panels, the results of which are currently being reviewed by BRE. EST is unable to comment on how the innovative uplift could apply to this product until we have had sight of the results of this review. **EST recommends that Ofgem delay any decisions on how the uplift could apply to this product until these results are available**.

Lighting

EST does not agree that lighting products should only be considered innovative under the Order if '*they lead to a significantly greater improvement in energy efficiency compared to CFLs*', and that '*the improvement compared to lighting actions under EEC 2002 – 2005 should be 20% more*'.

EST believes a 10% increase in energy improvement is probably more realistic for CFLs, although the technology that could deliver such a saving is some years off. However, other types of lighting will not be able to meet such levels of reduction compared to CFLs.

For this reason EST believes it is not appropriate to treat all lighting products as one, and that Ofgem should consider lighting products that are not used in current energy efficiency schemes, but which can offer a good energy saving over the conventional lamps used in their place, for example, energy saving versions of halogen dichroic lamps. These lamps are the small 'spotlights' that are now so common in many homes. Conventional lamps in such fittings typically consume 50W each. As they are often installed in numbers, it is not uncommon for in excess of 300W lighting to be installed in a single room. Three manufacturers have developed energy saving versions of these lamps, which utilise infra red coatings and advanced burner technology to save energy. Typically these lamps use 35W of energy to provide the same light output as a conventional 50W lamp - a 30% energy saving. While this is a lot less than the % energy improvement from a CFL this is still a significant energy saving, and the best currently possible in this growing sector for lighting. The halogen lighting sector has experienced an average year on year growth of 30% over the past 3 years. EST estimates that in 2004-5 some 20 million halogen lamps were sold. The energy saving versions also last 4-5 times longer than a conventional lamp.

There is currently no domestic market for energy saving halogen dichroic lamps, with only small numbers of sales in the professional sector. They cost more than the conventional versions and, as with CFLs, they would need the support of a scheme like EEC to gain significant market share. These lamps are likely to cost the energy supplier more than CFLs and lead to a smaller saving. This is therefore an excellent example of how the uplift could help stimulate innovative halogen lighting in domestic homes.

As such **EST recommends that lighting products should be considered innovative if they result in a specified energy saving over the conventional lamps used in their place. This energy saving is likely to differ between lighting products, and as such EST believes that Ofgem should consider and subsequently set energy efficiency improvement targets that would demonstrate significantly greater improvement in energy efficiency for different lighting products.**

Heating Measures that provide both heat and hot water for domestic premises
Within this section of the consultation document Ofgem uses the terms ‘solar water heating’ and ‘solar thermal’ interchangeably. However, solar water heating is a sub category of solar thermal. Solar water heating, as the consultation document notes, provides hot water only. While the term ‘solar thermal’ covers the provision of both water and space heating. Given that both solar water heating and solar space heating will result in different levels of energy efficiency improvement, it is important that this distinction is recognised.

In addition, it is not clear from the consultation document how the savings figures outlined in the consultation’s figure 5.1 have been derived. The savings attributable to solar thermal technologies appear to result from comparison against heating and hot water figures. EST has been advised by Clear Skies that, as a broad guide, solar thermal should provide 10-12% savings against overall heating and hot water, and should provide 50-70% savings against hot water only.

However, if Ofgem is referring to solar hot water heating then it would seem appropriate to calculate energy efficiency improvements based on a comparison against hot water figures only, i.e. like should be compared with like.

Providing the savings are calculated on a like-for-like basis then EST broadly agrees that an increase in the improvement of energy efficiency of 20% of the standard achieved under EEC 2002-2005 would seem appropriate to qualify as an innovative action.

Heating Controls
EST agrees that a 20% improvement in energy efficiency of that obtained from building regulations compliant heating controls would demonstrate a significantly greater improvement in energy efficiency. For example if a regulations compliant control system provided a 5% saving then a system that qualifies as innovative delivers a 6% saving.

Cold appliances
EST does not believe that suppliers have been promoting A+ rated appliances since July 2004. A+ rated fridges currently account for only 2-3% of all refrigerator sales in the UK, and A+ rated cold appliances for only 1.7% of all cold appliances sales. Given the limited market penetration of A+ rated cold appliances in the UK EST is concerned that requiring suppliers to promote A++ rated cold appliances could adversely impact the the sale of efficient cold appliances, especially as sales of A++ are almost non existent. Approximately 100 A++ cold appliance units were recorded as sold in April 2005 compared with 240,000 cold appliances in the same period.

EST therefore recommends that to demonstrate a significantly greater improvement in energy efficiency suppliers should be required to promote A+ and above rated cold appliances, as opposed to just A++ rated appliances as recommended by Ofgem. A+ cold appliances deliver on average a 24% energy efficiency improvement over A rated cold appliances, and an uplift applied to these appliances will deliver considerable Carbon savings.

Wet appliances
Because different wet appliances are at different places on the market transformation curve EST does not believe that all wet appliances should be treated in the same way for the purposes of the uplift.

Washing machines
EST is aware that some washing machines currently banded as A claim energy savings per wash of 0.17KWh/kg of wash. **For this reason EST agrees that this threshold (0.17KWh/kg of wash), as opposed to the actual rating of the machine should be used to demonstrate a significantly greater improvement in energy efficiency for wet appliances**. However, EST believes that the uplift should only be offered to machines that meet this threshold and are rated by the EU Energy Label AAA (Energy, Clean and Dry).

Dishwashers
Because the 0.17KWh/kg of wash would not apply to dishwashers, **EST recommends that that new EER endorsement criteria for dishwashers of EU Energy Label AAA (Energy, Clean and Dry) plus the EU Eco-Label requirement for water consumption be used to demonstrate a significantly greater improvement in energy efficiency**.

Tumbledryers
To the best of EST's knowledge no clothes dryers were supplied via EEC1. As such **EST believes that most energy efficient dryers available (i.e. A and B rated units) should benefit from an uplift to help transform the market** which is

dominated by C rated units. In addition, EST believes that all gas tumble dryers should be eligible for an uplift provided they demonstrate savings equivalent to or better than A or B rated electrical tumble dryers.

Washerdryers

To the best of EST's knowledge no washer dryers were supplied via EEC1. As such **EST believes that the most energy efficient available should benefit from an incentive to help transform a market that is dominated by C rated units.**