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Dear Mr Hargreaves

Response to Innovations Consultation Document

Thank you for the opportunity to provide an input into the consultation process.

As a general rule we would prefer to see any innovative product considered on its own merits rather than generalisations which may block future potential developments.

Our detailed comments on the consultation document (120/5) are as follows:-

New Technologies at early stage of market Penetration
1.4 We agree that the incentive should be available for new technologies as an incentive in the early stage of market penetration.

CHP
1.6 We agree that the incentive should be available for domestic CHP. In addition to micro CHP (ie units for individual houses) this should also include mini CHP, including units that serve groups of domestic residents. If such as CHP unit serves both domestic and commercial then the innovation uplift should still be available for the domestic proportion of the unit(s).

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New Qualifying Action – Energy Savings

5.6 In addition to comparisons to sales weighted averages or other legal minimum standards, energy savings for novel products should also be considered in comparison to the actual products that they replace, or the effects they have, e.g. on the energy balance of the building fabric. The energy savings could be determined by an agreed testing procedure or by modelling in an approved software/simulation programme e.g. BRE/BREDEM.

Loft Insulation

5.17 Whilst Ofgem considers it unlikely some new loft material could be considered for innovation (due to the low scope to improve upon the thermal characteristics) we suggest that the option is kept open, to encourage potential innovation (i.e. not dismiss outright). Also, the 20% uplift comparison with EEC1 should be for alternative replacements for the loft insulation materials itself that reduce heatloss by the same method (ie reduce heat transmission by thermal conduction by high thermal resistance materials only). Any other (new) treatments to the ceiling roof or roof space should be considered separately for their own additional energy saving potential, whether used on their own or in addition to standard loft insulation (ie not count as a 20% uplift on the standard loft but consider separately).

Cavity Wall Insulation

5.22 As in loft insulation above, comparison of new cavity wall material should be in comparison to a direct replacement of cavity wall material that slows heat transmission the same way, ie reduce heat transfer by conduction due to high thermal resistance materials. That is, the demonstration of 20% uplift should only apply to alternative standard cavity wall insulation type materials that reduce heat transfer by conduction only. Other materials which reduce heat transfer by other means or new treatment of the internal or external wall (either as an alternative or in addition to the cavity wall insulation) should be considered separately for their own contributions to energy savings (ie not count as a 20% uplift on the standard loft but consider separately).

Draught Proofing

5.24 We do not agree with the statement that energy efficiency potential by draught stripping is low. Existing properties, eg those with old metal framed windows or sash windows can have quite high infiltration rates. Also in new well insulated homes, the proportion of heat loss through infiltration starts to become significant (in percentage terms). Therefore draught proofing treatments that prove energy savings say 20% greater than EEC1 savings that could be determined by an agreed testing process should be considered for innovation uplift. Also, treatments to new build homes that show an improvement of 20% greater than the minimum building regulations, eg proved with air tightness tests, should also qualify for innovation uplift.

5.25 the 20% figure should be applied to the 11 $m^3/h/m^2$ at 50Pa ie 8.8 $m^3/h/m^2$ at 50Pa (not 7 $m^3/h/m^2$ at 50Pa).

External Wall insulation

5.28 We welcome that innovation for a new technology that reduces heat loss from 2.1 to 0.3W/m^2k or better to help stimulate this sector of the market to help improve hard to treat homes. Other treatments of external walls which may help reduce heat loss by other means (which are not comparable to traditional methods eg reducing heat loss by thermal conduction by materials that have a high resistance to heat flow by conduction) should be considered separately (whether used alone or in conjunction with traditional methods) for their own contributions to energy savings (ie not need to conform to the above 0.3W/m^2k standard)

Internal Wall Insulation

5.32 The fact that insulating internally avoids the thermal mass of masonry being unnecessarily heated (ie avoids the absorption of heat into a thermal mass that is then re-released at times eg in the night when the heat is not needed) should be taken into account. That is the dynamic situation of having the house be more responsive to the controls should be considered as well as the steady state heat loss (as represented by the 0.3W/m^2k targets). For example, if internal wall insulation, whilst only having a U value of say 0.4 W/m^2k still gave the same energy saving as that calculated for external wall insulation at steady state 0.3W/m^2k (due to the improved responsiveness of the house by avoiding unnecessary heating of the thermal mass of the walls), then this should still qualify.

Hot Water Cylinder Insulation

5.34 Whilst recognising that potential for improvement may be small we would like an open mind to be kept, just in case there is some future development that may come along and propose the 20% improvement on equivalent thermal resistance of insulation material should be used. This should be for like for like replacement of insulation materials that resist heat transfer by conduction. Other ways to save energy, eg by design of cylinder etc should be considered separately on their own merits.

Radiator Panels

5.36 We agree that improvement of 20% savings should qualify for innovation uplift.

Underfloor insulation

5.37 We presume that the example applies to new build as adding 100mm of floor insulation to existing properties would not be practical. Measures that improve heat loss through floors in existing homes should be considered for EEC savings (and potentially for innovation uplift) on their own merits (ie not be compared to the 100mm lambda 0.044W/mk).

Lighting

5.54/5.43 We do not agree that all lighting should be compared to CFL's (ie to be considered for innovation uplift that need to show an improvement of 20% on an existing 80% saving). Each lighting innovation should be considered on it's own merits and particularly the options available to the consumer to replace the existing light source with an energy efficient solution. There is a development to introduce an led equivalent to a halogen. This is likely to save 80% of the energy of an equivalent halogen but under the 20% rule this product would not qualify for an innovation uplift. We would therefore like to see a GLS replacement considered separately from non GLS lamps, eg halogen or spot light .

Boilers

5.47 We would like an open mind to be kept regarding possible improvements to boilers so as not to rule out any incentive for future innovations.

Ground Source Heat Pumps

5.50 Heat pumps should qualify for innovation as they are an innovative form of heating and have the lowest carbon emissions of an active heating system as an incentive in the early stages of market penetration.

Solar Thermal Collectors

5.50 As a very low carbon emitting form of providing heat solar thermal collectors should qualify for innovation as an incentive in the early stages of market penetration.

The Treatment of Hot Water

5.50/5.50 Hot water should be separated out from heating as the efficiency of hot water from a gas boiler will be much lower say 50% than that indicated by a SEDBUK rating. Innovative ways to provide hot water should be considered on their own merits, eg in comparison to the system it replaces (eg existing system – eg that may be an old gas boiler with poor efficiency at generating hot water, particularly in the summer when it runs at part load etc). Thus, say a solar collector that generates more than 20% of the hot water requirements should therefore qualify for innovations uplift.

Heating Controls

5.56 We agree that heating controls that demonstrate an improvement greater than that required when need to comply with building regulations, and controls installed without a new boiler should show improvements of 20% compared to the original uncontrolled installation - should qualify for innovations uplift.

Appliances

5.64 In the same way that A rated appliances in EEC1 had an up lift to help transform the market and increase market penetration and to make scheme administration a lot simpler, all A+ and A++ should qualify for the innovation

uplift (regardless of increase in efficiency compared to A rated and we would like to see Ofgem set the improvement above A equivalent to the average A+ performance).

Wet Appliance

5.67 To help as an incentive to gain market penetration and aid scheme deliver, all A+ wet appliances should qualify for the Innovation uplift.

Jug Kettles

5.68 New innovative ways to provide hot water for cups of tea etc should be considered on their own merit for potential innovation uplift.

CHP

5.71 Due to the low penetration and uptake in the past and to maintain consistency with micro and domestic CHP Community CHP, should qualify for the innovation uplift (even if greater than 50kWe). That is, provide innovation uplift to all CHP (micro, mini and community) to provide an incentive to increase market penetration in the future.

Community based Heating Systems

5.73 Systems that use fuels that are more environmentally friendly than the standard fuels (e.g. coal, oil, gas etc) should qualify for innovation uplift, eg methane, biomass, large scale heat pumps etc. A test could be used eg reduce carbon emissions by 20% compared to the fuel that would have been used. NB methane eg from waste should take into account the global warming potential of methane in carbon equivalents.

Yours sincerely

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