

SUMMARY of LightAware's response to Ecodesign consultation

We have only answered the questions relevant to LightAware, a summary of our responses is below.

Q.1 While we agree with the intention to introduce the new ecodesign requirements, LightAware believes that efficiency targets for lighting should be considered differently from legislation that sets standards for electrical products such as toasters as lighting has a profound impact on human health and on ecosystems.

In particular, the proposals only consider the economy and efficiency of new forms of lighting but omit consideration of its effectiveness or quality. To be effective, ecodesign policies for lighting require a multidisciplinary approach that considers its health, social, economic, public safety, and ecological impacts. So far, the introduction of LED lighting has been driven by financial savings and carbon reduction targets without regard to its wider impacts.

Another key issue that has not yet been considered is that the reduction in price of light as a commodity has led to increased use. The cost of light has fallen sharply and has resulted in increased night-time illumination and light pollution, which is increasing at two per-cent per year and has become a major ecological challenge and a cause for concern regarding human health.

Q.2 Yes, but LightAware believes that the health and ecological impacts of LEDs should be taken into account and that over time changes should be considered to minimise negative impacts.

Q.3 Yes, but LightAware believes that a literature survey of the health and ecological impacts should be undertaken and, if necessary, research should be commissioned to minimise any negative impacts.

Q.4 Yes

Q.6 Partially, but your assessment does not undertake any calculation of the elasticity of demand for lighting as a commodity as referred to in our response to question 1. This is likely to lead to an overestimate of financial savings (and reduction in carbon emissions). In addition,

the 'real' carbon savings achieved by the GB ecodesign and energy labelling requirements will fall as the proportion of electricity generated from renewables rises.

Q.13 We believe that there is an opportunity for GB to better align lighting standards with the needs of businesses, employees, and UK residents by encouraging the use of lighting which minimises adverse impacts on human health and wider ecology.

16a LightAware believes lumens per watt is a very poor measure of energy performance as indicated in the exhibit below. This is because it is only a measure of the output of the LED but does not indicate whether the light produced is useful in terms of human vision or measures its health impact.

Q.16b The major issues associated with LED lighting are risks to the health of light sensitive individuals. The main health risks are their high luminance (a large amount of light emitted by a point source leading to excessive brightness and glare), stroboscopic effects (flicker), CCT (their unusual emission spectrum, with a high proportion of blue light), non-uniform light distribution. It is likely that the combination of these effects is a significant cause of adverse health and ecological impacts.

Q.22 The most effective levers would be to increase incentives for people to switch off lighting, for example through regulation to reduce lighting nuisance. For example, shops, car showrooms and many other businesses leave lighting on all night or when premises are unoccupied. Significant savings could be made by introducing regulations requiring individuals and businesses to switch off unnecessary lighting.