



The Royal Academy
of Engineering

Consultation on the term 'carbon neutral': its definition and recommendations for good practice

Response from The Royal Academy of Engineering to the Department of Energy and
Climate Change

May 2009

This response has been prepared with the contributions of Fellows of the Royal Academy of Engineering. The Academy would be pleased to engage further with Government and other relevant bodies on the topic of carbon neutrality.

1. Summary

- 1.1 The Academy believes that there are difficulties with the Government's proposed definition of 'carbon neutral':

"Carbon neutral means that – through a transparent process of measuring emissions, reducing those emissions and offsetting residual emissions – net calculated carbon emissions equal zero."

- 1.2 Our concern centres on the inclusion of offsetting as a way of achieving net carbon emissions of zero. In our view, offsetting is not credible as an integral part of any process towards making products or services carbon neutral. This is because of the difficulties of auditing the amount of carbon that is offset, the inability of offsetting to prove additionality (see below) and our doubts that offsetting schemes operate at a scale required to make a difference.
- 1.3 Offsetting is also problematic because it may be regarded as a substitute or diversion from genuine reduction of emissions. The focus should be on efforts to ensure that, through the measurement and reduction of emissions, all products, services and processes are as 'low carbon' as possible rather than 'carbon neutral'. Publicly Available Standard 2050 (PAS 2050)¹ was developed for the measurement of carbon emissions of products and services and is therefore particularly useful for comparing the carbon intensity of otherwise similar products and services. In our view therefore, no new standards are required.

2. Offsetting

- 2.1 Offsetting schemes do not reduce the carbon emissions of any processes. It would be impossible to devise a scheme with widespread impact on reducing net global atmospheric carbon, primarily because they are not effective on a large enough scale. They frequently bring problems with additionality², i.e. whether the scheme purports to save carbon that would, in fact, not have been emitted anyway. There are also concerns over the practicality of and impartiality in auditing. In formulating policies, the Government should recognise the limitations of offsetting.
- 2.2 The proposed definition of "carbon neutral" (para. 4.1 of the consultation) currently relies on robust and auditable carbon offsetting which, although an attractive concept, is unachievable in practice.
- 2.3 We recommend that efforts should be redirected towards measuring and reducing carbon intensity as far as possible, i.e. to aim for 'low carbon' rather than 'carbon neutral' products, services and processes.

3. PAS 2050

¹ www.bsi-global.com/en/Standards-and-Publications/Industry-Sectors/Energy/PAS-2050/

² Voluntary Offsets For Air-Travel Carbon Emissions: Evaluations and Recommendations of Voluntary Offset Companies, Anja Kollmuss, Benjamin Bowell, Tufts Climate Initiative, December 2006, Revision 1.3; April 5 2007

- 3.1 A lifecycle approach should be taken in measuring and reducing carbon intensity. Publicly Available Standard (PAS) 2050, recommends a lifecycle approach in measuring and reducing carbon emissions. The standard was developed through a careful process involving wide consultation and is already endorsed by Defra. PAS 2050 works well for products and services across different sectors and is now being adopted in several countries.
- 3.2 PAS 2050 is sufficient to cover the measurement and reduction of carbon emissions. Because offsetting claims are often not properly validated and additionality cannot be proved beyond doubt, PAS 2050 specifically disallows offsetting claims when calculating and reporting carbon footprints. Therefore the Academy strongly supports the recommendation in the consultation document that the PAS 2050 approach be followed.
- 3.3 The Greenhouse Gas (GHG) Protocol, which groups emissions according to their sources, loosely incorporates a lifecycle approach in Scope 3 (other indirect emissions). A lifecycle approach allows Scope 3 to naturally encompass Scope 1 (direct greenhouse gas emissions) and Scope 2 (indirect emissions which one consumes but are generated elsewhere).

4. Marketing and advertising

- 4.1 The assertion that a company or product is 'carbon neutral' has marketing appeal, both to companies and consumers. However, companies should be incentivised to compete on maximising carbon reductions and there should be far less focus on the almost impossible goal of carbon neutrality. Categorising products or services as either carbon neutral or non-carbon neutral can mask real carbon efficiencies or inefficiencies.
- 4.2 A scaled labelling system may be effective in helping to provide incentives, although developing this system would be a complex process. Even the model of energy efficiency ratings given to white goods only accounts for energy use in operation, not embedded energy or energy relating to disposal. A similar carbon labelling system could only be accurate if a lifecycle approach were taken.
- 4.3 Use of the term 'carbon neutral' in advertising and corporate promotions may be unverified and therefore misleading. Government should ensure that claims that are neither valid nor credible are outlawed/ruled out. We are pleased to note that the Advertising Standards Agency (ASA) is being consulted and that the results of this consultation will feed into Defra's revised Green Claims Code.

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21 May 2009

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