

SCIENTIFIC AFFAIRS

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Dear Sir or Madam

DETR Consultation Paper: "UK Climate Change Programme"

The following submission has been prepared under the aegis of the Environment, Health and Safety Committee of the Royal Society of Chemistry.

The Society's Royal Charter obliges it to serve the public interest by acting in an independent advisory capacity and we are happy for this submission to be put into the public domain.

General Comments

We recognise that this Consultation Paper is aimed specifically at addressing issues to satisfy the UK's Kyoto obligations. We welcome it as such and are pleased to have had the opportunity to comment on its contents. We have made comments on specific points contained within it, described subsequently.

Having said the above we note that as a consequence the document inevitably emphasises the more efficient use of energy and not the use of less energy. It does not address the more long-term, and ultimately more important issue of what the sustainable solution might be. In this respect energy cannot be treated in isolation; an integrated move towards greater sustainability, whatever that might ultimately mean, will have as some of its facets the move away from dependence on fossil fuel, the move towards the use of renewable energy resources and, the move towards the use of less energy per capita. We believe the key to sustainability is being able to change people's lifestyles. The consultation document makes little mention of the need for people to review, nor even to consider, their consumption of energy. Whilst there remains no driver for people so to do then it is unlikely they will. Whilst energy remains as cheap as it currently is the demand to use it is likely to increase rather than decrease, with the concomitant effect on the production of greenhouse gases. Advances in chemistry will be necessary in order to bring about step changes in for example, the way energy is generated, distributed, stored and used, and also in developing more energy efficient ways of delivering goods, effects and services. The current cheapness of energy means there is also likely to be little current incentive for the development of these new technologies.

Comments on Specific Points in the Consultation Paper

Page 9 Para 35 "Overview"

Q1) We believe the main lesson to be learnt is the need for an energy strategy which is longer term than the Kyoto commitments.

Q3) We fear the document may be very optimistic in its assumptions. For example it assumes a significant continuing contribution from nuclear power.

Page 18 "Energy Supply"

Qii) Renewable energy sources have the potential to make a significant contribution. However thought needs to be given to matching different energy uses to the most appropriate energy source. Also in order to increase the take-up of solar energy the storage and collection technology needs to be improved. In order to encourage work in this area there needs to be appropriate drivers to encourage more energy efficiency - e.g. more energy efficient buildings.

Qv) Lessons should be learnt from elsewhere (e.g. parts of France and the US) that have made progress in developing energy service companies. The real issue is how to give the energy producing companies incentives to sell less energy. For example rather than charging customers by the quantity of the resource used, a certain amount could be supplied free of tax to protect those of limited means then there could be progressive taxation of resource use above this tax-free quota.

Qvi) With the right incentives combined heat and power can be employed at a fairly small scale. This is an important example of where relatively small changes to the incentives and disincentives could potentially result in large changes to the practice.

Pages 29-30 "Business"

Qi) We believe there remains considerable scope for cost-effective energy saving in the business sector primarily in SMEs. However real incentives are needed if only to overcome inertia in the first instance. A "user friendly" audit facility could help. In addition techniques could be developed to help "bring out" energy costs which are often subsumed in other costs. The relatively cheap current cost of energy will however not help stimulate interest in this in SMEs or anywhere else.

Qiii) The key is the visibility of energy costs, particularly in SMEs. If each SME makes a relatively small improvement then it could add up to a large national improvement. Could business tax be reduced in line with reductions in energy usage? SMEs could also benefit from free energy advice.

Qxi) There is ample scope for larger companies to influence their suppliers in particular, but the real issue is not what scope exists but what incentives exist to encourage this. Incentives that might encourage large companies to influence suppliers might include a requirement to label goods and services with energy usage and to report key environmental criteria, such as emissions of carbon dioxide, in company annual reports.

Qxii) Although these materials do not make a significant contribution to the total emissions of greenhouse gases, the principal sources should be covered under IPPC legislation.

Page 39 "Transport"

Qiv) Apart from the somewhat blunt instrument of increasing road transport taxation, the use of other measures such as leading by example and raising awareness are important. Government ministers and senior civil servants should set an example. We also feel that there should be more information made available to the public about the energy and other environmental implications of choices we all make in our everyday activities.

Page 54 "Agriculture..."

Qiii) Technically there is considerable scope to increase the use of biomass but once again the real issue is whether or not drivers exist to encourage this. For example our understanding is that UK research in this area has been very low key because biomass was not seen as an economic alternative to fossil fuels. Given appropriate drivers research could be encouraged into developing greater energy conversion efficiencies with the goal of approaching those achieved in living organisms.

Page 60 "Public Sector"

Qi-iii) Although the contributions from the public sector are likely to be relatively small it is important that an example is set here. It can also act as a valuable testbed for other sectors.

I hope these comments are useful.

Yours sincerely,

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[Chairman, Environment, Health and Safety Committee of the Royal Society of Chemistry](#)

The Royal Society of Chemistry was formed from a merger of the Chemical Society (founded in 1841) and the Royal Institute of Chemistry (founded in 1877); it inherited the prestige and responsibilities of its parent bodies. It is both the learned society for chemistry and the professional qualifying body for chemists in the United Kingdom.

There are about 46,000 members, of whom 10,000 are based abroad. Professional membership of the Society is an internationally recognised qualification. The Society also administers the examinations for the Mastership in Chemical Analysis (MChemA) which is a statutory requirement for practice as a Public Analyst.

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