



INSTITUTE
OF BIOLOGY

Consultation on Renewable Energy Strategy

A response from the Institute of Biology to the Department for Business, Enterprise and Regulatory Reform

19 September 2008

Institute of Biology

The Institute of Biology (IoB) is an independent and charitable body charged by Royal Charter to further the study and application of the UK's biology and allied biosciences. It has over 11,000 members and over 30 specialist learned Affiliated Societies.

1. We agree with government's ambitions to increase renewable energy. Biomass and biofuels can contribute to meeting government targets, but these and other renewables **must** be subject to an assessment of their overall environmental impact.
2. To the two challenges mentioned (tackling climate change and ensuring security of energy supply) we recommend that the government add environmental and social sustainability. Unless energy policies and technologies take these factors into account, they are liable to compound the errors made in previous biofuels policy.
3. We recommend that all major renewables projects be subject to a formal, transparent system of holistic ecosystem assessment which demonstrates whether the environmental and other benefits are greater than the disbenefits.
4. We recommend that government takes an ecosystems approach (as described by Defra¹) when developing renewables policies and delivery plans. This approach allows an assessment of the costs, benefits and unintended consequences.
5. There is a huge opportunity to for all sectors to work together to ensure renewable energy can meet its targets and provide more local benefits to the ecosystems and environment.
6. IoB – with our partners the Centre for Ecology and Hydrology, the British Ecological Society and the Science Council – is organising a policy symposium on the ecosystems approach from 29 April-1 May 2009. Renewable energy is one of the case studies the

¹ www.defra.gov.uk/wildlife-countryside/natres/eco-actionp.htm

symposium will cover. We welcome participation of BERR and other government departments in helping to make this policy tool a practical reality.

7. The renewables policy should be co-ordinated with the planning system (Planning Bill), transport policies, energy reviews, Marine Bill, Climate Change Bill, waste strategies and other relevant policies and legislation. It makes no sense, for example, to promote the use of biomass waste for energy generation while some local authorities charge householders to dispose of waste biomass.
8. Market failure is likely if the government relies on the energy industry to fund research into renewables such as second and third generation biofuels. Second and third generation fuels have considerable potential, but Government should be prepared to put significant funding into such research where industry does not.
9. Government could encourage the renewable energy industry to work with ecology/environmental researchers to determine how renewable projects can be designed to benefit ecosystems, for example 'whether offshore renewable developments will provide significant fisheries enhancement through the combined effects of artificial reef and spillover'.
10. For marine renewable projects, we recommend more emphasis on environmental impact assessments and monitoring of organisms that are key to the coastal ecosystem function, such as key predators (elasmobranchs ie sharks) and primary/secondary consumers such as crustaceans and echinoderms. These ecologically crucial groups are neglected in favour of charismatic animals eg birds and marine mammals.

Openness

The Institute of Biology is pleased for this response to be publicly available and will shortly be placing a version on www.iob.org. Any queries regarding this response should be addressed to Dr Barbara Knowles, Head of Science Policy, Institute of Biology, 9 Red Lion Court, London, EC4A 3EF, email: b.knowles@iob.org

Annex

Affiliated Societies represented by the Institute of Biology

Anatomical Society of Great Britain
Association of Applied Biologists
Association of Clinical Embryologists
Association of Clinical Microbiologists
Association for the Study of Animal Behaviour
Association for Veterinary Teaching and Research Work
Biometric Society
British Association for Cancer Research
British Association for Lung Research
British Crop Production Council
British Ecological Society
British Lichen Society
British Microcirculation Society
British Society for Ecological Medicine
British Society for Neuroendocrinology
British Society for Plant Pathology
British Society for Proteome Research
British Society for Research on Ageing
British Society of Soil Science
Fisheries Society of the British Isles
Freshwater Biological Association
Galton Institute
Laboratory Animal Science Association
Marine Biological Association
Nutrition Society
Royal Entomological Society
Scottish Association for Marine Science
Society for Applied Microbiology
Society for General Microbiology
Society for the Study of Human Biology
Society of Cosmetic Scientists
Society of Pharmaceutical Medicine