

Appendix B

CONDUCT OF THE STUDY

In order to carry out this study Commission Members sought written and oral evidence, commissioned studies and advice on specific topics and made a number of visits.

Evidence

In parallel with the news releases inviting evidence, which are reproduced in appendix A, and advertisements placed in the *London, Edinburgh and Belfast Gazettes*, the Secretariat wrote direct to a large number of organisations.

The organisations and individuals listed below either submitted evidence or provided information on request for the purposes of the study or otherwise gave assistance. In some cases, indicated by an asterisk, meetings were held with Commission Members or the Secretariat so that oral evidence could be given or particular issues discussed.

Government Departments

- ADAS
- Department of Health
- Department of the Environment, Transport and the Regions*
- Department of Trade and Industry*
- Foreign and Commonwealth Office
- Ministry of Agriculture, Fisheries and Food
- Office of Science and Technology
- Scottish Office*

Parliamentary bodies

- House of Commons Select Committee on the Environment, Transport and Regional Affairs*
- House of Commons Environmental Audit Committee*
- Parliamentary Office of Science and Technology*

European and international bodies

- DG XI (Environment), European Commission
- DG XII (Science, R & D), European Commission
- Food and Agriculture Organization of the United Nations
- Intergovernmental Panel on Climate Change, Working Groups I and III
- International Atomic Energy Agency
- International Energy Agency*
- International Energy Agency Coal Research – The Clean Coal Centre
- International Energy Agency Greenhouse Gas R&D Programme
- International Maritime Organization
- Organisation for Economic Co-operation and Development
- United Nations Economic Commission for Europe
- World Energy Council
- World Health Organization
- Wuppertal Institute für Klima, Umwelt, Energie GmbH

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Other organisations

ABS Consulting
Advisory Committee on Business and the Environment
AEA Technology*
AMSET Centre
Anglian Water Services Ltd
Association for the Conservation of Energy*
Association of British Insurers
Association of Building Engineers
Association of Electricity Producers
BG plc
Biffa Waste Services Ltd
Biomass Recycling Ltd
Bolton Metropolitan Borough Council
Borough of Pendle
BP Solar*
BRE
British Association for Bio Fuels and Oils
British Biogen
British Cement Association
British Energy Efficiency Federation
British Energy plc*
British Medical Association
British Nuclear Energy Society
British Nuclear Fuels Ltd*
British Nuclear Industry Forum
British Petroleum Company plc
British Photovoltaic Association (PV-UK)
British School of Belo Horizonte
British Wind Energy Association
CAG Consultants
Cambridge Econometrics
Campaign for the Protection of Rural Wales*
Centre for the Study of Regulated Industries
Chartered Institution of Building Services Engineers
Chartered Institution of Water and Environmental Management
Chris Blandford Associates
Coalgas (UK) Ltd
Combined Heat and Power Association*
Combustion Engineering Association
Confederation of British Industry*
Confederation of United Kingdom Coal Producers
Consortium of Opposing- and Nuclear Free- Local Authorities
Construction Industry Council
Construction Industry Research and Information Association
Consumers' Association
Consumers in Europe Group
Council for National Parks
Council for Nature Conservation and the Countryside
Council for the Protection of Rural England*

Country Landowners Association*
Countryside Commission*
Countryside Council for Wales
Cummins Engine Company Ltd
Dalkia plc
De Montfort University, Institute of Energy and Sustainable Development, and Lincoln
Renewable Energy Centre
East of Scotland Water
Eastern Group plc
Economic and Social Research Council, Global Environmental Change Programme
Economics for the Environment Consultancy Ltd
Electricity Association*
Electricity Consumers' Committees Chairmen's Group
Elm Farm Research Centre
Energy 21
Energy Advisory Associates
Energy Advisory Panel
Energy for Sustainable Development Ltd
Energy Saving Trust*
Energy, Technology and the Environment
Engineering and Physical Sciences Research Council
English Nature*
Environment Agency*
Environmental Services Association
Esso UK plc
ETSU*
European Wind Energy Association
EXO – Exothermics Ltd
Faculty of Occupational Medicine
Farming and Wildlife Advisory Group
Federation of Environmental Trade Associations
Foratom
Foresight Energy and Natural Environment Panel*
Forestry Commission Research Agency*
Friends of the Earth*
Friends of the Earth Scotland
GAIA Foundation
Gas Consumers Council
Geological Society
Global Climate Coalition
Global Commons Institute
Greenpeace UK*
Hadley Centre for Climate Prediction and Research, Meteorological Office
Haul Waste Ltd
Health and Safety Commission
Health and Safety Executive
Ian Pope Associates Ltd
ILEX Associates
Imperial College of Science, Technology and Medicine, Energy-Environment Policy
Research Group

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Institute for European Environmental Policy, London
Institute for Public Policy Research
Institute for Research in the Social Sciences
Institute of Arable Crops Research – Rothamsted
Institute of Biology
Institute of Directors
Institute of Economic Affairs
Institute of Energy
Institute of Grassland and Environmental Research
Institute of Petroleum
Institute of Physics
Institute of Wastes Management
Institution of Chemical Engineers
Institution of Civil Engineers
Institution of Electrical Engineers*
Institution of Environmental Sciences
Institution of Mechanical Engineers
International Project for Sustainable Energy Paths
International Sustainable Development Research Network
IT Power Ltd
Landfill Gas Association
Law Society
Lean Economy Initiative
Local Government Association
London Transport
Lye's Green Water
Magnox Electric plc
Mandix
Marine Conservation Society
Meteorological Office
National Consumer Council
National Council of Women of Great Britain
National Energy Action*
National Farmers Union*
National Grid Company plc*
National Home Energy Rating Scheme
National Power plc
National Radiological Protection Board
National Trust
Natural Environment Research Council (NERC)
Natural Resources Institute
NERC Centre for Ecology and Hydrology
NERC Institute of Terrestrial Ecology*
Network for Alternative Technology and Technology Assessment
New Product Research and Development
Newcastle City Council
North of Scotland Water Authority
North Yorkshire County Council
Norweb plc – United Utilities plc
Office for National Statistics

Office for the Regulation of Electricity and Gas
Office of Water Services
Open University, Energy and Environmental Research Group, and Technology Policy
Group
Power Generation Contractors Association
PowerGen plc
RJB Mining (UK) Ltd
Radioactive Waste Management Advisory Committee
Ramblers' Association
Renewable Energy Club
Renewable Energy in the Urban Environment
Rocky Mountain Institute, USA*
Royal Academy of Engineering
Royal College of General Practitioners
Royal Institute of British Architects*
Royal Institute of International Affairs
Royal Scottish Forestry Society
Royal Society
Royal Society for the Protection of Birds*
Royal Society of Chemistry
Royal Society of Edinburgh
Royal Society of Health
Royal Statistical Society
Royal Town Planning Institute*
Sandwell Metropolitan Borough Council
Scottish Environment Protection Agency*
Scottish and Southern Energy*
Scottish Hydro-Electric plc
Scottish Natural Heritage*
Scottish Solar Energy Group
Scottish Power*
Severn Tidal Power Group
Severn Trent plc
Shell UK Ltd*
Shell Group Planning Unit*
Shropshire County Council
Silsoe Research Institute
Slough Heat and Power Ltd
Society of Occupational Medicine
Solar Century
Solid Fuel Association
South Midlands Renewable Energy Advice Centre
South West Water Ltd
Southampton City Council
Steel Construction Institute
Surrey County Council, Environment
Sustainable Agriculture, Food and Environment Alliance
SWALEC plc
Thames Water plc
UK Centre for Economic and Environmental Development
UK Nirex Ltd

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UK Offshore Operators Association Ltd
UK Petroleum Industry Association Ltd
UK Round Table on Sustainable Development
UKAEA
Ulster Agricultural Organisation Society Ltd
University College London, Centre for Social and Economic Research on the Global Environment
University College London, Environmental Change Research Centre
University of Dundee, Centre for Energy, Petroleum and Mineral Law Policy
University of East Anglia, School of Environmental Sciences
University of Manchester, Faculty of Science and Engineering
University of Oxford, Environmental Change Unit, joint with Department of Engineering
Wavegen Ltd
West of Scotland Water Authority
West Wales ECO Centre
Women's Environmental Network in Wales
World Wide Fund for Nature UK*
WRc plc
Wycombe District Council
Yorkshire Water Projects Ltd

Individuals

Dr Mary Archer, National Energy Foundation
Mr W Bailey
Dr Ausilio Bauen, Imperial College of Science, Technology and Medicine, Centre for Energy Policy and Technology*
Dr R Barrass
Dr R Bentley, University of Reading*
Dr Brenda Boardman, University of Oxford, Environmental Change Unit*
Mr Philip Breeze
Dr Leonard G Brookes
Professor Melvyn Cannell, NERC Centre for Ecology and Hydrology
Sir Geoffrey Chipperfield, Energy Advisory Panel*
Professor Dame Barbara Clayton, University of Southampton School of Medicine
Professor M L Coleman, University of Reading*
Mr Jonathan Cowie
Professor Partha Dasgupta, University of Cambridge*
Professor J F Davidson, University of Cambridge, Department of Chemical Engineering
Professor Hans-Jürgen Ewers, German Council of Environmental Advisors*
Dr Nick Eyre
Mr David Hart, Imperial College of Science, Technology and Medicine, Centre for Energy Policy and Technology*
Professor Ian Fells FRSE, University of Newcastle upon Tyne
Dr Jonathan Fisher
Lord Flowers*
Dr Keith Guy, Air Products plc*
Dr Andrew Gilchrist, ETSU, AEA Technology
Professor David Hall, Kings College, London*
Professor G P Hammond, University of Bath

Dr Mayer Hillman, Policy Studies Institute
 Professor Sir Frederick Holliday, Northumbrian Water Group
 Dr Samuel Holloway, NERC British Geological Survey
 Sir John Houghton, Intergovernmental Panel on Climate Change, Working Group I
 Dr Tim Jackson, University of Surrey, Centre for Environmental Strategy*
 Mr Michael Jacobs*
 Professor Paul Jarvis, University of Edinburgh, Department of Biological Sciences
 Mr Michael Jefferson
 Professor Peter Liss, University of East Anglia, School of Environmental Sciences
 Dr George Marsh, ETSU, AEA Technology plc
 Professor A McMichael, London School of Hygiene and Tropical Medicine*
 Mrs Eryl McNally MEP*
 Dr Peter Michaelis
 Mr Julian Morris, Institute of Economic Affairs
 Professor P R Odell*
 Dr C H Osman
 Professor Mike Overcash, North Carolina State University*
 Mr Michael Parker, University of Sussex, Science Policy Research Unit*
 Mr Keith Pitcher, Yorkshire Water, ARBRE Project
 Dr Susan Roaf, Oxford Brookes University, School of Architecture
 Professor Colin T Reid, University of Dundee, Department of Law
 Professor Lewis E J Roberts, Emeritus Professor, University of East Anglia
 Mr Lee Schipper, International Energy Agency
 Professor B W Sellwood, University of Reading*
 Professor John Shepherd, Southampton Oceanography Centre
 Professor Keith Shine, University of Reading, Department of Meteorology*
 Dr Garry Staunton, ETSU, AEA Technology
 Dr Kelly Thambimuthu, International Energy Agency Greenhouse Gas R&D Programme
 Mr Roderick Taylor
 Mr Roger D Vaughan
 Dr Jim Watson, University of Sussex, Science Policy Research Unit
 Mr Tim Weller

Commissioned studies

The following papers were commissioned in the course of the study:

Energy and the Environment: an Issues Paper. Nick Hartley and Dr Dieter Helm, OXERA (Oxford Economic Research Associates Ltd). March 1997.

Energy and the Environment: the Institutional Framework. Dr George Yarrow and Dr Tim Keyworth, Regulatory Policy Institute. February 1998.

What Energy System for the UK in the 21st Century. Dr Paul Ekins, Forum for the Future and Dr Robin Cotton, Imperial College of Science Technology and Medicine. March 1998.

Renewable Energy Sources. Dr Tim Jackson and Dr Ragnar Löfstedt, Centre for Environmental Strategy, University of Surrey. March 1998.

Technical Innovation to Reduce the Adverse Environmental Impacts of Existing Energy Sources. Alison Smith, Rabindra Chakraborty, Allan Goode, Ian Marlowe, George Marsh, David Maunder, Philip Sharman and Ian Stewart, AEA Technology. March 1998.

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Prospects for Energy Saving and Reducing Demand for Energy in the UK. Jonathan Fisher, William Blyth, Simon Collings, Susan Boyle, James Wilder, George Henderson, Michael Grubb. March 1998.

Environmental Impacts of Energy. Dr Nick Eyre, Eyre Energy Environment. March 1998.

Sustainability. Roger Levett, Riki Therivel and Jane Carlton-Smith, CAG Consultants. March 1998.

Life Cycle Assessment of Energy Systems. Dr Peter Michaelis, University of Surrey. March 1998.

Visits

In the course of its work on energy and the environment, Members of the Commission and its Secretariat made a series of visits. The Secretariat is indebted to the British Embassies in Boston, Copenhagen, Tokyo and Washington DC, and the UK Permanent Representation to Brussels, for the assistance received in organising relevant itineraries.

27-29 January 1999 – European Commission, Brussels

Discussions with staff from: Directorate General VII – Transport; Directorate General XI – Environment, Nuclear Safety and Civil Protection; Directorate General XII – Science, Research and Development; Directorate General XVII – Energy; Directorate General XXI – Taxation and Customs Union.

Lunch with representatives from: BP Europe; Centre for European Policy Studies; Climate Network Europe; Electricity Association; Eurelectric

Dinner with Members of the European Parliament

3 February 1999 – Scotland

Visits to and discussions with staff at St Ninians Opencast Mine and Longannet Power Station

5 March 1999 – Thetford

Visit to and discussions with representatives of Fibrowatt, Thetford

18-19 March 1999 – European Commission, Brussels

Discussions with staff from: Directorate General VI – Agriculture; Directorate General XI – Environment, Nuclear Safety and Civil Protection

22-26 March 1999 – Japan

In the course of the five day visit, Members had discussions with representatives from the following organisations:

Atomic Energy Commission; Energy Conservation Centre; Institute of Energy Economics; Japan Atomic Industrial Forum; MITI; New Energy and Industrial Technology Development Organization; New Energy Foundation, Research Institute for Innovative Technology; Sharp; TEPCO R&D Center; Tokyo GAS Wonder Ship Energy and Environment; Tokyo Waterfront Subcenter

Lunch with the Federation of Electric Companies

Dinner with Professor Kenji Yamaji and Professor Hisashi, University of Tokyo; Dr Yoji Uchiyama, Central Research Institute of Electric Power Industries; Professor Takao Kashiwagi, Tokyo Agricultural Engineering University

27-30 April 1999 – Boston and Washington DC

In Boston, Members held discussions with representatives of: Harvard Committee on the Environment; Massachusetts Technology Collaborative; M J Bradley and Associates; Northeast Energy Efficiency Council; Renewable Energy Initiative

Dinner with representatives of the Conservation Law Foundation, Environmental Protection Agency, American Superconductor, University of Massachusetts Energy Program

In Washington DC, discussions were held with staff from: Alliance to Save Energy; American Council for an Energy-Efficient Economy; Business Council for Sustainable Energy; Edison Electric Institute; ENRON Corporation; Environmental Defense Fund; Environmental Protection Agency

Lunch with staff from the Cato Institute, Competitive Enterprise Institute, Heritage Foundation

Dinner with representatives from the Nature Conservancy, World Wildlife Fund, Environmental Protection Agency, Washington International Energy Group, US Department of Energy

2 June 1999 – Wales

Visits to and discussions with staff at: Penrhyddlan and Llidiartywaun Wind Farm, CeltPower; Carno Wind Farm, National Wind Power; Dinorwig, Mission Energy; Trawsfynydd, Magnox Electric

Lunch with representatives of Caerphilly County Borough Council, Countryside Council for Wales and the Environment Agency

23-24 June 1999 – Denmark

During a two-day visit, Members had discussions with representatives from the following organisations:

Danish Energy Agency, Danish Wind Turbine Manufacturers Association, Association of Danish Electric Utilities, Amagerværket Combined Heat and Power Plant

Lunch with representatives from the Confederation of Danish Industries, Consumer Advisory Board, Council for Sustainable Energy, Danish Board of Technology, Environment Secretariat, Ministry of Foreign Affairs

12 July 1999 – Yorkshire Water

Visits to and discussions with ARBRE project staff at the Eggborough Biomass Electricity Plant and a coppice plantation near York

1-3 September 1999 – Carnlough

Discussions with representatives of Department of the Environment, Northern Ireland and the Environment and Heritage Service

4 September 1999 – Northern Ireland

Visit to the Brook Hall Estate Biomass Project

Open Meetings

3 February 1999 – Edinburgh

A public meeting on the theme of fuel poverty was held at the City Chambers, Edinburgh

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2 June 1999 – Newtown

A public meeting entitled ‘Your energy, your environment, your future’ was held at the Theatre Hafren, Newtown, Powys

Secretariat

Other Members of the Secretariat who made a significant contribution to the content of the report at various stages were Keith Allott, Enid Barron, Ilga Nielsen and Matthew Shoults.

Appendix C

SEMINAR: ENERGY FOR THE WORLD WE WANT 2 JULY 1998

To assist the Commission in defining specific issues on which it would invite detailed evidence, a seminar 'Energy for the world we want' was held on 2 July 1998 at the Royal Institute of International Affairs, with a wide range of invited participants.

The programme for the day was:

Introduction to the Energy Study and the purpose of the day

Sir Tom Blundell, Chairman of the Commission from July 1998

Session 1: Shaping the kind of world we want

Rt Hon John Gummer MP, Former Secretary of State for the Environment

Discussion period

Session 2: Natural systems and human systems - working together?

Sir John Houghton, Co-Chairman of Scientific Assessment Working Group, Intergovernmental Panel on Climate Change, and Chairman of the Commission until June 1998

Discussion period

Session 3: Energy technologies for future needs

Michael Jefferson, Deputy Secretary General, World Energy Council

Discussion period

Session 4: Ground rules and how they are changing

Walt Patterson, Energy and Environment Programme, Royal Institute of International Affairs

Discussion period

Plenary session and Chair's closing remarks