ROYAL SOCIETY OF CHEMISTRY PARLIAMENTARY LINKS DAY – TUESDAY 24TH JUNE 2008

Science and an Uncertain World

The Rt Hon John Denham MP

Professor Jim Feast, President, Royal Society of Chemistry, the organisers of Parliamentary Links Day, hosted by Dr Brian Iddon MP and Mr Mark Lancaster MP, welcomed a capacity audience, comprising some 200 plus invited participants from within and without Parliament, to Links Day in the Attlee Suite on Tuesday 24th June.

Parliamentary Links Day is thus the largest scientific event held annually at the Houses of Parliament and involves the active participation of sister societies including the Institute of Biology, Royal Academy of Engineering, Geological Society, Institute of Physics, the Royal Society and many other scientific organisations. The theme selected this year provided a timely opportunity to discuss ways in which science can contribute to solving global challenges involving crucial issues as diverse as food, water, energy, and climate change.

Professor Feast introduced the Rt Hon John Denham MP, Secretary of State for Innovation, Universities and Skills, who thanked the Royal Society of Chemistry for all their efforts in bringing professional scientists and engineers, with their unique relevance and importance to the economy, into closer engagement with members of both Houses and thereby improving mutual understanding of the parliamentary process.

Sir David King, Institute of Physics, Director, Smith School of Enterprise, University of Oxford, and former Chief Scientific Adviser to the Government and Head of the Government Office for Science, then described, with examples, how we have successfully managed to deal with apparently intractable environmental problems in the past by good science combined with decisive action, both nationally and internationally. This was an introduction to a description of the likely outcome of a 'business as usual' approach to the partly predictable risks posed by climate change. However, additional and poorly understood earth system science factors pose an additional risk of rapid and non-linear increases in temperature. A major behavioural change is required, combined with transformation of the power generation infrastructure to one which is decarbonised, and thus able to supply carbon-free electricity for transport by road and rail and to the domestic and industrial infrastructure alike.

Professor Rosemary Hails, Institute of Biology, called for a more holistic approach to the interlinked issues of climate change, energy, food and population growth with appropriate regulation using a flow chart procedure. This will enable advantage to be taken of new technologies, proportionate to the risks involved, where these are demonstrated to have an overall benefit to the environment.

Lord Krebs, Royal Society, introduced the issues surrounding policy versus science and the cultural gaps that may exist between independent scientists and government scientists and the need for an evidence-based policy. If the evidence is lacking then every effort should be made to obtain it before introducing policy changes. The established media continue to demonstrate their general lack of scientific understanding to the disadvantage of all concerned, in seeking to treat all scientific issues simplistically as either/or with equal weight being attributed to both sides of an argument, ignoring any vested interests involved, even when the scientific view may be 99.9% for and 0.1% against. This effectively stultifies all reasonable public debate of science policy issues concerning science and engineering by elevating the often very narrowly restricted views of a very small minority to the level of equal and opposite to peer reviewed

Lord Krebs

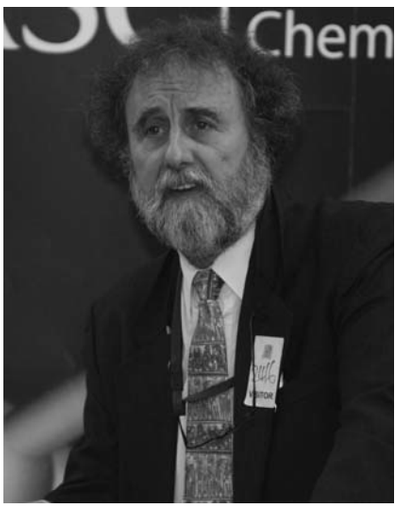
Professor Lynne Frostick and Lord Browne

science, thus indicating that the opportunity for a provocative discussion is often more important to the media than the underlying science.

Dr Bob Crawford, Royal Society of Chemistry, raised chemical science priorities, especially the global issue of sustainable water and the water poverty threshold with particular reference to Africa, pointing out the inadequate infrastructure and the high costs of provision of even minimal amounts of water for cooking. His examples were all drawn from areas of high population density which is particularly relevant to the increasingly urbanised African population living remotely from access to natural sources of fresh water.

Professor Lynne Frostick, Geological Society, referred to sea level rise, compounded by subsidence in south-east England and water expansion due to heating, leading to an uncertain future for 21% of the UK population that live within 30km of the current UK shoreline. Threats of flooding, as in Hull, jeopardise property, people and infrastructure such as the Dungeness Nuclear power station. She called for monitoring by earth observation satellites and creation of long term datasets to evaluate the changing situation of our coastal defences.

Lord Browne, Royal Academy of Engineering, claimed that engineers decide the future and went on to discuss six bad ideas that keep coming back and which had got us into serious difficulties in the past. These include subsidising energy in order to avoid making decisions related to future energy supply; the development of biofuels; the idea that we already have all the technologies that we are likely to need in the future; there is no further need for innovation; and sacrificing long term plans in short term decisions.



Professor Robert Watson

Professor Robert Watson, Chief Scientific Adviser DEFRA, raised local and global scale issues ranging from the destruction of mangrove swamps thereby placing coastal populations at risk from tsunami inundation, to biofuels and the vital role of agriculture in ensuring human health.

David Willetts MP, Shadow Secretary of State for Innovation, Universities and Skills, emphasised policy issues including better advice for young people wishing to take up science subjects at school; single science subject GCSEs available to all, to enable those wishing to take A level science, with a view to reading science at university; premium payments for engineering of 32% over arts subjects; development of better links between schools and universities. Serendipity is important in funding science as the outcomes of scientific research may be completely unpredictable. If only predictable science is funded we will miss innovative developments.

David Willetts MP

Phil Willis MP, Chair of the Commons Select Committee on Innovation, Universities, Science and Skills, in winding up the invited presentations, emphasised the need for serendipity, translation and basic research. He criticised the lack of funding for an enquiry into biosecurity in view of pathogens increasing with climate change, the need for strategic vision and our failure to capitalise on groundbreaking science. Policy issues were discussed especially the need for food policy involving scientists, politicians and the public. However public perception of politicians is unfortunately low while it is high for scientists, and uncertainties require scientists for their resolution.

One of the informative papers provided in the comprehensive briefing pack included notes on A Guide to Science in Parliament which is freely available to allcomers from the website of the Parliamentary & Scientific Committee, which can be found at: www.scienceinparliament.org.uk