

Royal Society statement on UK Government's White Paper on energy

Ahead of the publication of the Government's White Paper on energy, the President of the Royal Society, Lord May of Oxford, and Vice-Presidents of the Royal Society, Professor David Wallace, Professor Patrick Bateson, Professor John Enderby and Professor Julia Higgins, today (10 February 2003) issued the following joint statement:

"The Government must show political courage in its forthcoming energy White Paper by spelling out clearly how nuclear power, renewables and energy efficiency measures could best contribute to a future in which carbon dioxide emissions are drastically reduced. These policies must be driven by the aim of ensuring we have an adequate and secure supply of affordable energy to power our vehicles, to light our homes and to safeguard our jobs, whilst also properly dealing with the production of wastes, including both carbon dioxide and radioactive materials.

"The main problem for the UK and other countries has been the unmanaged release of carbon dioxide into the atmosphere resulting from the use of fossil fuels in energy generation. There is convincing evidence that this is causing major changes in the Earth's climate, the consequences of which could threaten the health and livelihoods of so many people on this planet.

"Therefore, the UK, like the rest of the industrial world, must adopt energy policies that ensure we are on the path to reducing our emissions by as much as 60 per cent to stabilise the amount of carbon dioxide in the atmosphere and stave off the potentially most catastrophic effects of climate change. The Government's figures show that UK carbon dioxide emissions have increased over the last two years, and although we are likely to hit our Kyoto targets, the UK's energy policies must take us towards cuts in emissions of 60 per cent in the longer term.

"One of the major challenges facing the UK is how to generate electricity whilst minimising the damage that can be caused by waste products. But in the short to medium term, it is difficult to see how we can reduce our dependence on fossil fuels without the help of nuclear power. At present, the UK relies on nuclear power to generate about a quarter of our electricity. All nuclear power stations are scheduled to reach the ends of their lives within the next 30 years.

"Unless the rate of development of both renewables and energy efficiency measures makes up for the loss of capacity resulting from the phasing out of nuclear power, the UK will become more reliant on fossil fuels, which is not consistent with an overall aim of drastically reducing our carbon dioxide emissions. According to the Government's own estimates, we will be more dependent on fossil fuels to generate electricity in 2010 than we were in 1995.

"If the White Paper extends the present moratorium on constructing new nuclear power stations until, say, after the next election, it is difficult to see how this could be described as 'keeping the nuclear option open'. Even with a commitment to continue planning, and with the moratorium lifted after this period, no new nuclear power stations would be in operation in the UK within the next 15 years, by which time our nuclear capacity will have halved.

"The UK could also do a better job of raising its targets for renewables and reducing the wasteful use of energy. However, most experts agree that the UK target of generating 10 per cent of electricity from

renewable sources by 2010 is, although an admirable aspiration, already very ambitious. Higher levels of investment would be required to allow adequate development of renewables and energy efficiency measures to completely make up for the shortfall in energy supply resulting from the closure of nuclear power stations.

“One of the problems often cited in connection with the development of renewable and nuclear sources of energy is that they appear to be uneconomic compared to fossil fuels. This is based on the flawed assumption that there is no cost associated with pumping carbon dioxide into the atmosphere. The Government needs to introduce a charge for the right to produce carbon dioxide, through for example a carbon tax or a system of tradable emissions permits. Such measures are required to balance the economic arguments surrounding energy generation.

“If the Government does change its present policies on nuclear energy, the Royal Society believes that plans to build any new nuclear power stations must be accompanied by a strategy for dealing with the long-term storage and disposal of the radioactive waste that they will produce.

“The Royal Society does believe that the UK must have a solution to the long-term storage and disposal of existing radioactive waste, much of which was a product of the civil and military nuclear programmes from the 1950s, and new waste from the operation and decommissioning of the present generation of nuclear power stations. However, we do not necessarily need to have this solution before making a decision about the building of new nuclear power stations.

“The White Paper must demonstrate joined up thinking on how to ensure a secure supply of affordable energy, how to manage the waste products of energy generation regardless of whether it is in the form of radioactive materials or carbon dioxide, and how to increase energy efficiency. The fact that DEFRA is responsible for dealing with waste, while DTI deals with the commissioning and operation of power stations, must not prevent a coherent approach to policy that meets our future energy requirements whilst properly managing any waste that is produced.”

Please send any comments or enquiries about this statement to:

Richard Heap

Science Advice Section

The Royal Society

6-9 Carlton House Terrace

London

SW1Y 5AG