



FREE SCOTTISH GOLF GUIDE
 CLICK FOR MORE DETAILS SCOTLANDonSUNDAY

THE SCOTSMAN
 Sat 2 Apr 2005

print  close 

Global warming fuels call to invest in nuclear fusion

JAMES REYNOLDS AND IAN JOHNSTON

THE government's chief scientific adviser yesterday urged more investment in the holy grail of nuclear fusion to help tackle global warming.

Sir David King, who last night gave the opening speech at the Edinburgh International Science Festival, said he believed fusion power would become a reality.

The phenomenon, which could provide almost limitless energy, has been researched by scientists worldwide for decades and Sir David urged more work to be done so it could be achieved sooner.

Unlike existing power stations, which run on nuclear fission, fusion reactors produce little radioactive waste and do not create carbon dioxide, one of the main greenhouse gases.

The reactors could also provide power for centuries to come as they can be fuelled using sea water.

Most of Britain's power stations are due to shut down in the next 15 years and the government has said it will make an announcement on whether any more will be built after the election, expected next month.

Speaking at the Royal Museum of Scotland, Sir David repeated his warning that global warming was a real problem and action had to be taken to reduce emissions.

And in an exclusive interview before his speech, Sir David put forward nuclear power - particularly fusion - and power from hydrogen as ways to save the planet from an environmental catastrophe. He said modern fission reactors were far cleaner than Britain's ageing nuclear plants and this meant governments had the "option" of building them.

"We need energy sources that are inherently carbon-free. In the longer term I believe that fusion power stations are a reality. It is just a question of what timescale we are talking about," he said. "We need to be investing today in the development of fusion power so we have that additional power supply to come.

Science and technology can provide the mechanisms for taking this forward. We also need populations and governments to understand the nature of the problem."

Sir David added that modern fission reactors were still a potential source of energy.

"We are part of the international community that is working on developing new, safer, more efficient fission power stations so that governments have that option," he said.

"They also produce much less radioactive waste per unit of energy produced. So, if we were to replace all of our existing power stations in the UK with today's technology of nuclear power stations and ran them for about 50 or 60 years we would add a total of 10 per cent to our radioactive waste stockpile."

But he added: "This does not get away from the problem of dealing with the radioactive waste and decommissioning the station, or the problem of nuclear proliferation and states getting hold of the material."

An experimental fusion reactor called Jet has been built near Oxford. Its successor, Iter, a joint European Union, United States and Japanese venture which is in the design stage, is expected to produce more power than is put in for the first time when it is completed.

Duncan McLaren, the chief executive of Friends of the Earth Scotland, said governments should be spending money on eco-friendly power sources rather than research into fusion. He said: "Dr King is absolutely right to be warning of the dire consequences of failing to tackle climate change.

But one policy that should be firmly off the agenda is nuclear power."

This article:

<http://news.scotsman.com/scitech.cfm?id=348962005>

Edinburgh International Science Festival:

<http://news.scotsman.com/topics.cfm?tid=1049>

Climate change:

<http://news.scotsman.com/topics.cfm?tid=52>

Websites:

Edinburgh International Science Festival
<http://www.edinburgh-festivals.com/science/>

Friends of the Earth Scotland
<http://www.foe-scotland.org.uk/>

UK Met Office Hadley Centre for Climate Prediction
<http://www.met-office.gov.uk/research/hadleycentre>

UN Framework Convention on Climate Change
<http://www.unfccc.int>

US Environmental Protection Agency
<http://www.epa.gov/globalwarming/>