**Britain facing large energy gap**

“ **Fossil fuels will remain the dominant energy source - there is no alternative** ”   
John Loughhead **Britain is facing a shortfall in energy supply in the near future, according to a major report.**

Within a decade, the country may be generating only about 80% of the electricity it needs. A panel of 150 experts says fossil fuels will remain the mainstay of supply, with renewables expanding and nuclear power almost certainly needed. The panel urges the government to take steps quickly to solve the issue; doing nothing, it says, is not an option.

"Up to the year 2050, fossil fuels will remain the dominant energy source - there really is no alternative," said John Loughhead of the UK Energy Research Centre, who compiled the report following a two-day conference held last month under the auspices of the Geological Society of London.

The conference drew contributions from about 150 delegates representing all sectors of the energy field.

"If the UK is to remain on the path of reducing atmospheric emissions of greenhouse gases, it will need to retain some nuclear capacity," Dr Loughhead told reporters at a news briefing on Wednesday.

"Renewables are going to play a role, but they're going to need support if they're to continue on a downward path of cost."

**Nuclear closure**

BRIDGING THE ENERGY GAP - KEY CONCLUSIONS

 Generating capacity shortfall of 7-16GW by 2015

 Equivalent to about 20% of current capacity

 Without need to restrain emissions, gap could be bridged easily

 Fossil fuels will remain the dominant technology

 Nuclear is proven and reliable, but building takes at least a decade - decision needed soon

 Renewables could supply 40% of generation by 2050

The immediate issue is the impending closure of most British nuclear power stations and many coal-fired units.

By 2015, all four Magnox nuclear stations still operating will have shut down, as will five of the seven stations running Advanced Gas-Cooled Reactors (AGRs). Under the European Large Combustion Plant Directive, many of the nation's coal-fired plants will also close in the next decade.

In principle, the gap could be bridged by new power stations burning gas or coal; but this would work against the government's short term targets and long term aspirations on reducing greenhouse gas emissions. "Without the need to reduce emissions, there would not be an energy gap by 2050," said Dr Loughhead.

Meanwhile, demand may continue to rise; and managing that demand, says the report, is a key issue. Technologies exist to increase efficiencies, but they are not being used to anything like their full potential, it finds - largely because the public is not properly engaged in the energy issue. This is one area in which it recommends urgent attention from the government. Another is setting up the right frameworks to encourage investment and research, setting up a long-term stable marketplace which will allow companies to plan for the future.

**Creating the climate**

"If there is a next generation of nuclear stations, they are almost certain to be built with private money," said John Loughhead. “ **If you don't want nuclear, there are hard choices to be made** ”   
Shaun Fitzgerald

"Companies are looking at an investment spanning 80 years, from construction to decommissioning; and there is concern within the investor community about having a regulatory framework which takes account of this and which will not be changed after commissioning."

The report concludes that the gap in electricity supplies left by nuclear closures will almost certainly have to be bridged by building new reactors, if the government is to fulfil its long term ambitions on climate change.

"The conclusion of our discussions was that renewables can't plug the gap soon," said Charles Curtis of Manchester University and the nuclear company Nirex.

"They will play a part, but it's unlikely they will provide everything we need; they need more support, more aid in deployment."

There was clearly some dissention from that conclusion among experts consulted for the report.

The report will be formally launched at London's Royal Society on Thursday morning, and its authors hope it will stimulate government action.

Key considerations for the government are, it believes

* setting up stable fiscal and regulatory frameworks
* finding ways to engage the public in energy questions
* stimulating the development of new technologies such as carbon capture
* exploring options for new nuclear stations

The government is unlikely to make a formal announcement on new nuclear build before the middle of next year, when a committee advising on options for disposing of Britain's existing nuclear waste is due to present its recommendations.

The researchers were emphatic that whatever decisions are taken, the government needs to take them swiftly.