

DINNER/DISCUSSION SUMMARY

“How should radioactive waste be managed?”

Held at the Royal Society, 6 Carlton House Terrace, London SW1Y 5AG
Tuesday 12th March 2002

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In the Chair: The Baroness Wilcox

Council Member, The Foundation for Science and Technology

Speakers: The Lord Howie of Troon

House of Lords

Dr Robin Jeffrey FREng

Chief Executive, British Energy

Professor Ekhard Salje FRS

Programme Director for Research, Cambridge-MIT Institute

The Rt Hon Michael Meacher MP

Minister for the Environment, Department for Environment, Food and Rural Affairs

The invited speakers identified two major issues on radioactive waste: how it should be disposed of and where.

In discussion some thought the second question should be addressed now. 40% of the land area of the UK had been said to be potentially suitable for deep disposal, but that figure was thought to be very optimistic. It would be a major undertaking to find and characterise optimal rock masses, and it was argued that research ought to start at once.

Against that it was argued that it was not practical politics to start geological surveys or publish a list of areas which might be suitable, desirable though it was to build up the knowledge base. The Government would inevitably be accused of plotting. Nothing could or should be done secretly. The form of disposal should be settled before location was considered.

Another speaker confirmed that NIMBY - not in my back yard - was still very much alive, as witness the reactions to a proposed windfarm on the Isle of Skye. Consultation was necessary, but none of the options would get strong public support and ultimately the Government would have to decide.

Another suggestion was that siting issues should be considered over the duration of the whole debate, first in general and then in more specific terms. There

could be a discussion, up front, of the way in which the question of location should be addressed. In other countries the resistance of local communities had been dealt with by compensation. Some called this bribery, but it was necessary to be realistic. In Finland an intermediate and high level repository was in operation, and a group of journalists taken to see it could not understand what all the fuss had been about.

The question of siting could not be considered independently of what was to be deposited. The more successfully waste was encapsulated, the more sites would be suitable. One speaker thought it might be a mistake to lump intermediate and high level waste together, since the latter was much more difficult to deal with. Different solutions might be needed for different parts of the problem.

One speaker raised the question of who should own radioactive waste in the long term after it had been placed in a repository. There was support for the view that it should be an independent body, which would also operate the repository but not have responsibility for developing policy.

There was concern over the erosion of the UK nuclear science and technology base as people in relevant disciplines, including geology, retired and were not replaced. Young people were reluctant to

go into the area, and the skills which would be needed if it were ever decided to build a new nuclear power station were no longer available in the UK.

The issues had been discussed by the invited speakers in UK terms. It was suggested that it might make sense to look for a European or global solution. In response it was acknowledged that there were geologically suitable disposal sites in other countries, for example one near Afghanistan, but it might not be a good idea to use them. Transporting the waste would be problematic, and in any case it would be hard to persuade other countries to accept nuclear waste from the UK. One speaker took a jaundiced view of the success of efforts to get international agreement on anything over the last century.

It was noted that a substantial part of the existing accumulation of radioactive waste in the UK was of military origin, and was accordingly the responsibility of the taxpayer.

There was a question whether nuclear power should still be used to generate electricity, when there was as yet no decision on what to do with the resulting waste. It was not, however, an option simply to abandon nuclear power forthwith, given that it accounted for over a quarter of the electricity used in the UK. It was argued, indeed, that the present nuclear power stations needed to be replaced as they reached the end of their working lives, because there was no realistic prospect of replacing them with renewable sources of energy. The Government had suggested that the latter should contribute 20% of electricity generation by 2020. Making the use of fossil fuels acceptable through the recovery and sequestration of CO₂ would be prohibitively expensive. One participant, indeed, suggested that the quantity of radioactive waste currently held was modest, and that it would only be worth making decisions about long-term storage if nuclear power generation came back with renewed capacity.

A speaker urged the need for a more balanced debate in order to reach a consensus on what solution would be acceptable. The protagonists tended to distort the issues. Thus, for example, the tonnage of radioactive waste to be dealt with was quoted without being compared with other forms of waste. Cadmium, mercury and lead remained toxic for ever, and the dangers from CO₂ emissions were immediate. Different radioactive elements tended also to be lumped together without regard to their different decay periods.

Other speakers agreed. As yet there had been little success in communicating with the public about relative risk. The risks to health from landfill sites were only reported in the medical press, whereas radioactive waste and genetically modified organisms made the front pages. It was very hard for the public to know what to trust in the strongly polarised debate

on the latter subjects. The newspapers were not neutral. There was perhaps a case for a body other than the Government to launch a debate on radioactive waste. The benefits and problems of all the options needed to be brought out into the open, so that the eventual outcome was seen as fair.

It was observed that there was a wider issue of the acceptability of science to the public at a time of rapid change in society. The decision-making process was more important than the technology. It would be unrealistic to expect positive agreement on a strategy for radioactive waste: what was needed was continuing acquiescence. It was for Parliament to give consent on behalf of the people; not just once but in regular votes during a long-term process.

One speaker saw a danger of underrating the public. People had a better understanding of risk and risk avoidance than they were given credit for, and would take a risk if they saw advantage in doing so. People used mobile telephones in spite of the uncertainty over their effects on health, because they offered benefits. By contrast, genetically modified foods had not been accepted because consumers did not see what advantage they might offer. The public was quite capable of understanding the issue whether it was better to continue dumping CO₂ into the atmosphere by burning fossil fuels or take the risk of nuclear power generation.

Another speaker disagreed, seeing little scope for rational public debate. In the 1950s a study of voter behaviour in a marginal seat had found that the majority favoured Conservative policies but returned the Labour candidate in successive general elections. Voting was based on tribal loyalties. In the debate on nuclear power the public should not be bamboozled with becquerels. They would acquiesce if they trusted the government.

A number of speakers had stressed the long-term consequences of decisions made now, and the responsibility which present decision-makers bore toward their descendants. In discussion it was questioned whether many people really cared about what would happen even 100 years ahead. Nevertheless there was a clear duty to consider posterity, and it was suggested that any decisions should be capable of being reversed in the light of experience.

Jeff Gill

The discussion was held under the Foundation's Rule that the speakers may be named but those who contribute in the discussion are not. None of the opinions stated are those of the Foundation which maintains a strictly neutral position.
