Fast reactor move hits European collaborations

- British government eschews the long term
- Atomic Energy Authority looks abroad

London

DRASTIC cuts in development of fast reactor technology in Britain have cast doubt over Britain's role in collaboration with its European partners. The British government last week announced a cut in the present fast reactor research and development from £105 million to £10 million, saying that public funding was not justified because fast reactors would not be commercially viable for 30–40 years. But the government maintains that, with a core programme of research, Britain will continue to contribute to the development of fast reactor technology at an economic cost and this will allow continued collaboration with Britain's European partners.

The UK Atomic Energy Authority (AEA) is not so optimistic. It says that to continue collaboration on research, which began in 1984 with an intergovernmental memorandum of understanding, would be unfair to Britain's partners because the basis for collaboration has been the exchange of intellectual property, and now that Britain's contribution is likely to cease, other countries should not have to subsidize the British programme.

Britain also had an important role to play in a programme of collaboration with the electricity utilities of France, West Germany, Belgium, Luxembourg and the Netherlands to build an experimental fast reactor, probably in France, with a capacity of over 1000 MW, and at a cost of around £2,000 million. A reprocessing plant was to be built to process the fuel, probably at Dounreay in Scotland. Britain's role in the reactor programme was in design. Now the programme may be slowed down as the group decides which country should take on the design of the reactor.

In Britain, the cuts bring a wave of redundancies and cast doubt over the future of the AEA. Over the next two or three years, the authority will shed around 2,500 of its 13,000 staff. And more redundancies may follow. Most of the jobs lost will be at the authority's plants at Harwell (Oxfordshire), Risley (Cheshire) and Windscale (Cumbria). At Dounreay in Scotland, the centre for Britain's fast reactor programme, there will be no job losses in the immediate future. The prototype fast reactor, which accounts for 800 jobs, is due to close in 1993–94 and the associated reprocessing plant three years later.

John Collier, chairman of the authority, feels that closure of the protoype is unjustified. "It comes just at the time when our fast reactor is working better than before", he says. The reactor burns fuel more efficiently than expected, and this year the burn-up target of 20 per cent was achieved.

When the programme began in the 1960s, a future shortage of fossil fuels was expected to push up the price of uranium, which would have favoured fast reactors as, unlike thermal reactors, they run on plutonium. But Britain is still self-sufficient in fossil fuels and, with the discovery of rich seams of uranium, prices have dropped.

The AEA, however, thinks that commercial viability of fast reactors is nearer than the government predicts. And by abandoning a technology in which Britain is a world leader, and has already invested £3,500 million, Britain may miss out on a potentially large export market. Last year the AEA, anticipating future cuts in government funding, began a search for replacement contracts. And last week an agreement was signed with the Sumitomo corporation of Tokyo, which will act as agent for the authority in Japan. The authority predicts contracts worth millions of pounds from the agreement. It will now intensify its attempts to find alternative funding and will appoint 20 marketing specialists to speed up the process.

Christine McGourty

■ THE future of British research into nuclear fusion, over which Britain has been haggling with ministers of the European Community, is in doubt as a result of the government cuts in fast reactor research, which reflect a policy of withdrawal of public funding for projects with only long-term commercial benefits.

An agreement has finally been reached on a budget for the European fusion programme after Britain had angered its fellow members by insisting that more than 10 per cent of the budget should be held over until 1992. But a compromise was reached; 50 million ECU (European Currency Unit; 1 ECU = £0.69) of the budget of 735 million ECU will be held over. The agreement will be formally approved at the next meeting of the European Parliament.

Funding for fusion research in Britain is secure only until 1992, when the Joint European Torus at the Culham Laboratory in Oxfordshire will be completed. C.McG.

Fast breeder generates controversy

Munich

THE fast-breeder reactor at Kalkar has generated nothing but controversy after 16 years of construction, 18 planning permits and DM7,000 million of investment. In mid-July, Environment Minister Klaus Töpfer had to rush back from vacation to settle a cabinet crisis over the reactor. Töpfer (Christian Democrat, CDU) is now threatening to bring the Social Democratic (SPD) government of the *Land* of North Rhine-Westphalia (NRW) before the federal constitutional court in order to to force it to resume the reactor licensing procedure.

The 300-MW plant is located 70 km west of Düsseldorf, not far from the Dutch border. Dutch and Belgian electricity companies are partners in the project and would have to be repaid about DM1,300 million if the project were abandoned.

Kalkar was begun in the 1970s by an optimistic West German government which saw it as a step towards completing the nuclear fuel cycle. The Federal Minis-

try for Research and Technology (BMFT) paid the major share of the construction costs and is now losing DM10 million per month because of the delay.

North Rhine-Westphalia's government's enthusiasm for the project vanished after the Chernobyl accident in 1986. Critics claim that Kalkar will be out of date by the time it goes into operation in the early 1990s; that it will not 'breed' new plutonium anyway and is therefore unnecessary; and that there is already ample generating capacity.

BMFT spokesman Holm Kilbert asserted that Kalkar can still play a valuable role in research on nuclear power. Japan began building a fast breeder quite similar to Kalkar just a year ago, he said, so Kalkar "can't be so wrong". West Germany is part of a European consortium to improve nuclear power plants. West Germany would disappoint Great Britain and France if it cannot put Kalkar into operation.

Steven Dickman