

Nuclear debate splits open in France...

[PARIS] A 15-year programme set up by France in 1991 to explore options for the disposal of nuclear waste has come under attack from a large group of politicians, who claim that the programme has become biased in favour of just one option, geological storage.

The group also says that the programme pays insufficient attention to long-term alternatives, such as research into the transmutation of long-lived nuclear waste into shorter-lived elements.

The reopening of the debate about nuclear waste comes less than six months after the Socialist government decided to abandon the fast-breeder reactor Superphénix, removing the rationale for the continued pursuit of the plutonium fuel cycle, and with it the need for the world's largest reprocessing plant at La Hague on France's northern coast.

Taken together, these events suggest the overall strategy of France's nuclear power programme is being exposed to extensive national scrutiny for the first time. "I am very satisfied about this," says Claude Detraz, head of the Institute for Nuclear and Particle Physics at the Centre National de la Recherche Scientifique (CNRS).

The nuclear waste programme was established by a 1991 law which postponed a decision on what to do with waste until 2006, to allow time for more research into three approaches to disposal. One is to develop

techniques for transmuting radioactive elements in waste. Another is to study conditions for surface storage. The third requires the government to select two sites for the construction of deep 'rock laboratories'.

But an appeal launched last week, and already signed by more than 40 politicians belonging to the governing Socialist coalition, protests that the deep storage approach is already being favoured at the expense of the others — more than half the FFr1 billion (US\$173 million) annual budget of the waste programme currently goes on studies on deep storage.

"The thinking of the nuclear lobby [in favouring deep storage] is 'out of sight, out of mind'; they want to give people the impression that the problem of waste has been solved when it has not," says Michèle Rivasi, the newly-elected member of parliament leading the protests.

More broadly, the appeal reflects an emerging preference for 'reversible' options where waste would be stored in a form that could be retrieved for processing should new techniques become available. Claude Allègre, the research minister, recently said that he opposes deep storage as "dangerous for future generations".

The appeal also demands the reopening of public inquiries into the siting of the planned rock laboratories. It points out that one site in la Vienne department approved by public inquiry had been previously



deemed unsuitable on geological grounds by the independent National Evaluation Commission (CNE) responsible for monitoring the waste programme.

The industry ministry last week agreed to shift 15 per cent of funding for deep storage to reversible surface storage options. Meanwhile, the Socialist group in the National Assembly has decided to hold a debate on the entire nuclear power programme in the next few weeks.

The politicians' call for greater emphasis on fundamental research into waste disposal options echoes a report released earlier this year by the CNE, which highlighted, for example, a virtual absence of research on the disposal of dangerous fission products such as iodine and caesium.

Nonetheless, Bernard Tissot, who chairs the CNE, argues that the organization of French research on nuclear waste has "improved considerably" since the release of a highly critical report by his commission in 1995 (see *Nature* 376, 204; 1995).

For example, the GEDEON joint body to coordinate such research has been set up by the CNRS, the Atomic Energy Commission and Electricité de France (EDF), while CNRS itself last year set up a FFr5 million multidisciplinary programme (PACE) on nuclear waste disposal, a fivefold increase on previous spending.

GEDEON intends to fund a small FFr2-million experimental model of a novel subcritical reactor for the transmutation of waste proposed by Carlo Rubbia, former head of the European Laboratory for Particle Physics, CERN. "We are too locked into existing technologies," says Detraz, who argues that the use of fast-neutron reactors for incinerating plutonium (see *Nature* 365, 381; 1993) is also worth exploring.

Detraz says that the funding of such research is all the more urgent because of the long delays in introducing large-scale systems; it takes 10 years to develop and test a demonstrator and more than 20 for a prototype.

Declan Butler

... as new waste body is proposed for the UK

[LONDON] The management of radioactive waste in the United Kingdom should be taken over by a new commission, independent of the nuclear industry and answerable to government and parliament, says a report by Britain's Parliamentary Office of Science and Technology.

The body would be funded through a levy on the nuclear industry, and would be responsible for selecting a waste disposal site. It would also carry out research, which would be peer-reviewed before publication. Its decision-making would be open to public scrutiny, and it would take into account the concerns of "all stakeholders".

The report says that a separate organization should

then take over the job of designing, building, financing and operating a waste disposal facility approved by the commission and regulatory bodies. The work would be done under contract to the government and the nuclear industry.

The proposals would mean breaking up Nirex, the company owned by the nuclear industry that is at present responsible for all aspects of radioactive waste disposal. Nirex was recently prevented by the government from further investigations on a proposed deep underground repository for waste from nuclear power stations (see *Nature* 386, 423; 1997).

That decision led to widespread agreement that radioactive waste

management needs a thorough review before a further site is found and that Nirex may not be the best organization to take the issue forward. Nirex has been criticized for a lack of openness in the past, and some view it as being too close to the nuclear industry.

The timing of a government decision on nuclear waste disposal policy is likely to depend on the outcome of a review of radioactive waste management announced this week by the House of Lords Select Committee on Science and Technology. The committee's final recommendations will not be presented to parliament until next summer. But Nirex has already shed almost half of its 200 staff. **Ehsan Masood**