

Privatization poses questions for UK electricity research

London

BRITAIN'S electricity supply industry announced last week that it is to double its expenditure on research into possible health risks associated with magnetic fields produced by the distribution and use of electricity. The extended research programme, which for the coming year will increase to £1 million, will make use for the first time in Britain of newly developed personal exposure meters to help build up an accurate picture of magnetic fields experienced by people in their daily lives. A decade of research into the question has failed to arrive at a firm conclusion.

The Central Electricity Generating Board (CEGB) is at present supporting two independent research projects, at the universities of Leeds and Manchester and at health authorities in Yorkshire and Lancashire, looking for possible links between living near power lines and adult and childhood cancers. Preliminary results from the childhood study have found no association; the results from the adult study are expected next year.

A project commissioned by the New York State utilities and published last year examined possible biological effects of magnetic and electric fields. One study, in Denver, suggested a small positive correlation between childhood cancer and proximity to power lines. The new British study will involve volunteers from the electricity supply industry wearing personal exposure meters at home and at work; assessing magnetic fields in homes by using new vehicle-mounted sensing equipment; and a study by independent epidemiologists of all newly diagnosed childhood cancer cases in England and Wales that will enable the child's past exposure to be better estimated.

The announcement of the new research programme has, however, prompted renewed speculation about the fate of the industry's research interests after its privatization. Earlier this month, the government produced a white paper (policy document) outlining its plans for how the industry should be sold off. It is proposed that the 12 distribution organizations (area boards) should become private companies. The CEGB will be split into two parts, the larger of which will own the nuclear power stations. The white paper does not mention the fate of the industry's considerable research capability.

Last year the CEGB spent £162 million on research and development. Most of this (68 per cent) went on nuclear research, while 16 per cent was spent on research into the environment and new energy sources. The CEGB's Technology



Monitoring magnetic fields generated by power lines. But would future shareholders approve?

and Planning Research Division employs 800 people, mainly at its three laboratories. Precisely who will have responsibility for research activities after privatization is a question that is worrying CEGB researchers, as is the question of the new company's level of commitment to non-profit-linked research. The CEGB has already pulled out of one joint project, into the decommissioning of nuclear reactors.

The board is examining ways of organizing its research after privatization, but few individual scientists seem to know what is to become of them. As an employee at CEGB's Central Electricity Research Laboratory in Surrey speculated last week, "We're on a prime site next to the M25, so we'll probably be turned into a supermarket". Simon Hadlington

UK's biotechnology lacking specialists

London

BRITAIN will not be able to keep pace with its industrial competitors in the expanding field of biotechnology unless serious manpower and training problems are addressed. Such is the chief implication of a survey by the Association for the Advancement of British Biotechnology of its 80 member companies, whose results were released last week.

Shortages of manpower are reported both at the first degree and PhD levels in fermentation, protein chemistry and plant molecular biology, and less so in enzymology and chemical engineering. The short age of plant molecular biologists, due to the increasing emphasis on plant biotechnology, is of particular concern to the industry. Furthermore, the recent trend to concentrate efforts on plant gene technology has slowed down advances in fundamental plant biochemistry and physiology. Efforts are being made to redress the balance, notably by a joint government-industry programme launched last year to encourage research into the control of plant metabolism.

The study predicts a rapid expansion of application in protein engineering, with a consequent shortage in enzyme technology, protein chemistry and biochemical engineering. Recognition of the importance of training in management, business administration and marketing is increasing, the study says, but only gradually compared with Britain's main trade competitors.

Simon Hadlington

High priority no guarantee for Germany's graduate colleges

Munich

WEST Germany has announced a scheme to improve graduate education at universities. The plan, introduced on 22 February by the influential Wissenschaftsrat (science council), would establish 80 'graduate colleges' for the systematic education of doctoral candidates. The West German government and the *Länder* (states) are being asked to finance the new colleges with up to DM40 million annually.

Sixteen graduate colleges exist already in fields such as molecular biology, engineering sciences and history of science. The colleges organize university faculty members to give courses to the students and allow each student to become familiar with a number of subfields. Students who have completed their *Diplom* (the rough equivalent of a master's degree) in close to the minimum of eight or nine semesters are favoured in the competition for scholarships. In addition to lowering the

average age of doctoral recipients, the colleges help to soften the rigid system of one-on-one graduate advising that has become the norm.

Encouraged by the programme's success, the Wissenschaftsrat wants the government to take the lead in expanding it. Ten of the existing colleges were established by charitable foundations such as Stiftung-Volkswagenwerk and six more by the federal and *Länder* governments on an experimental basis.

The lion's share of new federal support would fund up to 1,200 doctoral and 160 postdoctoral scholarships annually. The *Länder* would have to pay material and running costs for the colleges.

The Education Ministry has given the programme a "very high priority", according to a spokesman, but its success cannot be guaranteed in the forthcoming negotiations with the hard-pressed Finance Ministry. Steven Dickman