

# Value-for-money yardstick now dominates UK science decisions

London

BRITISH science stumbled on through 1987, despairing at the perennial shortage of funds but alarmed and indignant at suggested solutions. The return to power, in June, of Mrs Margaret Thatcher's Conservative government for a third term signalled little respite from the financial hardships of the past. Instead, 1988 will see the start of the evolution of a new framework for the management of science, with industrialists wielding greater influence in the distribution of the science budget, and a concentration of research in fewer institutions.

For the universities, the coming year will be dominated by the passage through parliament of the Education Reform Bill of Mr Kenneth Baker, Secretary of State for Education and Science. Since its publication last November, initially muted protests at the bill's proposals on university funding and academic tenure have steadily grown into a full-throated clamour of opposition. The next few months will see spirited lobbying in the House of Lords, where the bill is now being debated, to secure provisions for guaranteeing academic freedom in the absence of tenure and loosening the direct hold of education secretaries on the distribution of funds between institutions.

Academic science found an almost unanimous voice in the condemnation of proposals, published in July by the Advisory Board for the Research Councils, to divide higher education institutions into three types, with varying levels of research and teaching. The government is expected to announce its position on the proposals by the early summer. Whether the institutions will be classified as suggested by the report is less certain than the support the government will give the formation of interdisciplinary research centres attached to institutions. The Science and Engineering Research Council has already started this process.

The nature of the work carried out in the university research centres will be determined to a large degree by two new bodies announced in 1987, one, ACOST (Advisory Council on Science and Technology), to advise the government exclusively on areas of scientific priority, and the other, CEST (Centre for Exploitation of Science and Technology), to alert industry and the government to emerging areas of strategically important technology. The voice of the businessman resounds loudly in both.

In January, Sir Frank Layfield recommended that the construction of a pressurized water reactor at Sizewell, in Suffolk, be allowed. Official government approval

soon followed and work started in July, reviving Britain's nuclear power programme, on ice for nearly a decade. Approval for a similar station at Hinkley Point, in Somerset, is expected this year.

The post-election government reshuffle saw the ejection of Mr Geoffrey Pattie from his position as Minister for Information Technology at the Department of Trade and Industry (DTI). Pattie was a keen advocate of an expanded space programme, recommending a doubling of the national space budget to £200 million. The British National Space Centre (BNSC), formed in 1984 to coordinate the nation's space effort, had in September 1986, at the government's request, produced a 15-year plan outlining options for British involvement in space, requiring extra sums ranging from £90 million to £200 million. Last July, Thatcher announced that no more money was available for space. A few weeks later, BNSC's director-general, Mr Roy Gibson, resigned, having been refused an extra £7 million to keep open British options on various European collaborative programmes. Since then, Britain has isolated itself from its fellow members of the European Space Agency (ESA) by refusing to take part in expensive long-term infrastructure projects and vetoing an increase in the mandatory science budget. The government wants to see private industry put more money into space research; 1988 will see BNSC become more orientated to the needs and interests of industry.

As at ESA, British involvement with two other international ventures was plagued by uncertainty, although ultimately with happier outcomes. Continued membership of CERN, the European Organisation for Nuclear Research, was eventually agreed in December, after months of nail-biting in the high-energy physics community. Britain managed to squeeze aboard the European Synchrotron Radiation Facility at a subscription of 10 per cent — less than the going rate.

A follow-on to the Alvey programme of advanced information technology will be announced in 1988. The new programme will be closely tied with the European Community's ESPRIT programme, and the government's contribution will be far less than the £425 million recommended by a committee whose findings have been with the department for more than a year. An internal DTI review may succeed in disentangling from red tape the government's much-vaunted LINK programme for which £210 million is allegedly available to encourage collaboration between industry and universities.

Simon Hadlington

# Astronomy looking up in Australia

Sydney

"MAKE it pay" has been the government's message to science in 1987 as Australia reacts to changing patterns of international technological leadership, and sees the wealth that technology can create.

According to Barry Jones, whose own change in title — from head of the Department of Science to Minister for Science and Small Business within the Department of Industry, Trade and Commerce — symbolizes the change in thinking, funding for scientific research will depend increasingly on how much progress scientists can make in finding partners in industry.

Jones believes that one of this year's biggest issues will be the question of concentration of resources. Is it right to spread resources thinly and equitably across all areas of research or is it more sensible to concentrate resources to create a 'critical' mass in a few strategic areas?

The question will be high on the agenda of the Australian Research Council (ARC), a new body which will be responsible for most funding of university research, and answerable to the new Minister for Education, Employment and Training, John Dawkins. ARC's aims will be to direct research resources in the service of national goals rather than purely on the criterion of academic excellence. Not until Dawkins appoints the council's chairman and staff will it be apparent whether short- or long-term goals will dominate policy.

A scientific breakthrough in the handling of coal is one that Barry Jones boasts of as the kind of thing Australia needs. Announced a few weeks ago, it involves liquefying coal into a fine slurry that can be handled as easily as other liquid fuels. Jones hopes it will earn A\$300 million a year in exports while revitalizing the coal industry and cutting pollution.

The coming year is to be one of national celebration: 1988 is the bicentenary of the European settlement of Australia. Amid the festivities will come major boosts for Australia's traditional strength in astronomy: the commissioning of the "Australia Telescope", the largest VLBI (Very-Long-Baseline Interferometry) radio-synthesis telescope in the Southern Hemisphere; a new gamma-ray telescope at Woomera; and a revolutionary long-baseline optical interferometric telescope which will make possible for the first time the direct measurement of the diameters of thousands of stars.

A new National Science Centre, designed to be a "temple of science education", will open near the new parliament house. But Australians should take note that half of its A\$200 million cost was a bicentennial gift from the people of Japan.

Charles Morgan