Australian science budget

Election promises not kept

Canberra

THE first budget of the Labor Government under Prime Minister Bob Hawke, presented on 23 August, was parsimonious in expenditure on science and technology, with most appropriations failing to match inflation. Principal beneficiaries are companies willing to invest in research in high technology. The overall economic strategy seems to be a mildly stimulatory budget constrained by containing the deficit below \$A8,400 million (4.7 per cent of gross domestic product).

Estimated government expenditure in areas relevant to research is shown in the table. As the inflation rate is about 10 per cent, any change in expenditure less than this must be regarded as a fall in real terms. The main points of the budget are:

● **Defence** science and technology establishment funds have fallen. These go to projects such as the Jindalee over-the-horizon radar, defence against anti-ship missiles (Project Winnin) and underwater detection aids.

● **Medical** research grants have risen significantly in real terms. These provide funds for basic research in universities and institutions such as state government departments, the Howard Florey Institute and the Walter and Eliza Hall Institute.

● **Industrial** research and development incentives schemes have been improved to support high technology research and development. Under the scheme, companies can apply for three kinds of grants: commencement grants, intended to encourage companies developing a new capability; project grants, for specific projects; and public interest grants for projects considered to be in the national or public interest. The biggest increase is in the allocation to public interest grants, rising from \$A4.9 million to \$A10 million.

● The Australian Atomic Energy Commission's allocation includes \$A1.6 million for the fourth year of a five-year safety upgrading programme for the Hifar reactor and \$A1.3 million towards the

building of a pilot fabrication plant to produce and test the Synroc radioactive waste disposal technique.

● The Commonwealth Scientific and Industrial Research Organization (CSIRO) has again suffered a cut in funding, particularly in its expenditure on major capital works as work on the Australian National Animal Health Laboratory nears completion. The \$A316.7 million breaks down to \$A268.7 for operations, \$A4.5 million for equipment, \$A5.4 million for repairs and maintenance and \$A26.0 million on capital works. In addition, CSIRO will receive as separate allocations \$A3.5 million for the Australian telescope (commenced last year and expected to cost \$A29.0 over five years), \$A7.0 million for an oceanographic research vessel being constructed as a national facility, increased support for key technology areas and an allocation for the construction of marine science laboratories, which will bring its total allocation to \$A331.6 million.

● The Antarctic Division's budget is increased, but by less than the increase promised during the election earlier this year. The increased support will buy transport facilities including a marine research ice-breaker and Hercules aircraft.

● **Basic research.** There is only a marginal increase, if any, in the Australian Research Grants Scheme despite an election promise of a 10 per cent increase in real terms. Together with the Queen Elizabeth II Fellowships, the scheme will administer \$A21.8 million in 1983-84 for basic research projects in physics, chemistry, biology, earth sciences, engineering, applied sciences and humanities. Marine science research administered by the Marine Research Allocations Advisory Committee, on the other hand, will get an increase. Support available to universities through the National Biotechnology Scheme amounts to \$A1.5 million, but the National Research Fellowship Scheme has at least got off the ground. **Vimala Sarma**

West German budget

Science beats inflation

WEST German non-nuclear energy specialists will have to tighten their belts a notch or two next year, to judge by budget proposals now being debated in the federal parliament in Bonn.

The ministry for research and technology (BMFT), which accounts for the lion's share of federal research cash and spends 40 per cent of its funds on energy research and development, has been squeezed on three sides. First it faces rising costs in its fast-breeder and high-temperature reactor research programme: second, it has to respond to "green" pressure to act on acid rain; and last it struggles within tight restraints on the whole federal budget. Responding to the latter, BMFT is meekly proposing a one per cent increase (in current marks) in its total budget — which means a real reduction of 2-3 per cent with present German inflation. Overall, given parliamentary approval, the renewable energy and conservation research budget of BMFT, often held up as an example by proponents of alternative energy in other countries, faces cuts of 10-15 per cent next year. Many items, such as passive solar collectors, will receive reduced support, although some, solar voltaics for example, will enjoy increases.

BMFT officials were quick last week to point out the rationale behind these moves. Many alternative energy technologies need little further research, they said: their adoption is now not a matter of research but of price and market economics.

On the nuclear side, BMFT is proud of its agreement last April with industry to support about one-quarter of the cost of the SNR-300 fast breeder project at Kalkar and of the high-temperature reactor (HTR) project. SNR-300 is now estimated to cost in total DM 6,500 million (£1,600 million); the HTR, DM 4,000 million (£1,000 million). The latter should be ready for commercial operation in October 1985, and the fast breeder around a year later.

Given the level of industrial support indicated in April, this should leave BMFT picking up a bill for Kalkar in 1984 of around DM 450 million and for the HTR of about DM 300 million including research done at Karlsruhe research centre. In addition, a large part of Karlsruhe's research budget of more than DM 300 million is spent on fast breeder research. All these figures, however, are approximate and subject to parliamentary debate, BMFT emphasizes: it is not inconceivable that the industrial contribution could rise a little, officials say.

Meanwhile, the Max-Planck-Gesellschaft, which supports some of the most important German research institutes, should do a little better than inflation (up 5 per cent in current marks), and

	1981-82 Actual \$AM	1982-83 Actual \$AM	1983-84 Estimate \$AM	Change \$AM/%
Defence science & technology establishments	125.9	138.8	144.0	+ 5.2/+ 3.7
Universities	1,006.6	1,090.9	1,126.3	+ 36.0/+ 3.3
Medical research grants	25.6	29.6	38.0	+ 8.4/+ 28.3
Walter & Eliza Hall Institute	1.6	3.2	8.3	+ 5.0/+ 157.1
Industrial research and development	24.2	52.8	71.6	+ 18.8/+ 35.6
Australian Industry Development Corporation	—	45.5 (credit)	12.5	+ 58.0/NA
Australian Atomic Energy	37.8	36.4	38.3	+ 2.0/+ 5.4
CSIRO	293.5	238.2	316.9	-11.3/-3.4
Antarctic Division	21.8	32.1	36.2	+ 4.1/+ 12.7
Research grants	20.1	22.1	24.9	+ 2.3/+ 12.8
Energy research and conservation	15.8	18.0	19.4	+ 1.4/+ 7.6
National biotechnology	—	—	1.5	+ 1.5/NA
National research	—	—	0.6	+ 0.6/NA

Source: Budget Statement No.3 of 1983-84 Budget Paper No.1, tabled in the House of Representatives on 23 August 1983. NA, not applicable.