

# US research budget now in better shape

## Dying Congress restores earlier cut-backs

Washington

It may not last, but in contrast with previous years, when President Carter's requests for additional funding for science were trimmed back by Congress, the final 1981 research budget looks in even better shape than when it was presented in January 1980.

The Administration revised its initial request in March, reducing a proposed growth in spending on research and development from 11 to 8 per cent. But while Congress has agreed to cuts in other areas of social spending, research and development has been relatively protected.

Last week, for example, when Congress finally agreed to an appropriations bill covering the budgets for 23 assorted federal agencies, only three — the National Aeronautics and Space Administration (NASA), the National Science Foundation (NSF), and the American Battle Monuments Division — received more money than they had asked for.

As in previous years, legislators have been kind to the budget of the National Institutes of Health (NIH). Although the final figure is yet to be agreed, the House has approved an NIH budget of \$3,616 million, and last week the Senate gave its approval to a \$3,686 million budget. Whichever figure is finally decided upon, it will be higher than the \$3,581 million initially requested, and will result in a 5.5 to 7.5 per cent increase in NIH's budget over last year.

In the Department of Energy, threats to the basic research budget — which includes funding for high-energy physics and nuclear physics — were successfully fought off during the summer. The final sum for items under the responsibility of the department's Office of Energy Research will be \$1,145 million, only slightly less than the \$1,203 million requested, with the major reduction being the postponement of improvements to facilities at the national research laboratories.

Only in the case of the Department of Defense, for which the Administration had originally requested a hefty 17 per cent increase in spending on basic research, is the final figure likely to be substantially lower. Congress has approved an appropriations bill which will cut this increase to 12.5 per cent, reducing the planned real increase from 8 to 3.5 per cent. The final figure may be even less, since Congress has also asked the Pentagon to impose further unspecified cuts totalling 4

per cent across the whole of its research and development budget. In the case of NASA and NSF as well, the final figures may be reduced by a requirement that the Office of Management and Budget distributes a further 2 per cent cut across all the agencies covered in the appropriations bill.

Congress has also forced several significant changes in the content of the Administrations proposals for federally-sponsored research programmes.

At NSF, for example, sustained pressure from Senator Edward Kennedy has led to the agreement to introduce a new programme to boost women and minority scientists. Mr Kennedy had added his own "Women in Science" bill to the Senate version of the NSF appropriations bill; and the House finally agreed to a \$30 million programme which will include more than 100 grants for women scientists extra to those which would be otherwise awarded. The NIH budget, on which a final total has yet to be settled, includes an extra \$35 million for training grants which the Administration had suggested be cut back to enable the number of new and

competing research grant awards to be kept constant.

A large part of the increase in NASA's budget will go to cover the additional costs of the much-delayed space shuttle. However, Congress is also becoming increasingly concerned about cost and schedule over-runs in virtually all of the space science programmes.

As a result, Congress has directed NASA to ensure that it receives approval from the National Academy of Sciences before making any substantial programme changes. This move, opposed by several NASA administrators, is supported by Congress as a way of ensuring an adequate response to any future technical difficulties.

Despite the set-backs being experienced by the various space science programmes, almost all have escaped the congressional budget process relatively unscathed, including the proposed new gamma-ray observatory. However, there were warnings that some projects could still be halted through budget rescissions early next year when the new administration takes over.

## Oil, shale or mirage in West Siberia?

The strange story of the supposed Bazhenov oil field in western Siberia, with its reserves of over 600,000 million tonnes of oil, reached the world's newspapers two weeks ago at a particularly sensitive moment. The threat to world oil supplies posed by the Gulf War, and Western contingency plans for a further technological embargo on the Soviet Union should Soviet troops be ordered into Poland, and the impending OPEC meeting in Bali made the announcement of the new field, with reserves surpassing world proved oil reserves, a major consideration for politicians and oil magnates alike.

The report on the Bazhenov field came from Petrostudies, a two-man Swedish team which monitors all open Soviet publications on the oil industry. The consensus of expert opinion, ranging from the CIA to the Soviet oil industry, is that its report is an exaggeration. One French expert went as far as saying that it would amount to a "geological miracle". Petrostudies, however, remains adamant about the size of the find, but is now prepared to concede that a considerable proportion of the oil may not be recoverable.

Challenged with a Soviet statement that the deposit was not oil but shale, Petrostudies director Manlyo Jermol replied that the Bazhenov shale was scientifically important because it contained liquid crude. Until now, he said, it had been believed that such oil was to be found only in porous rocks. He cited the Soviet

geologist, Ivan Nesterov, director of the West Siberian Research Centre for Oil Prospecting who, in 1978, had announced that Soviet research had refuted the old text-book assertion that shales cannot accumulate free oil.

A few days before the Petrostudies announcement, Nesterov was interviewed on Moscow radio in connection with the publication of the guidelines for the new Five Year Plan. On this occasion he was vague about the West Siberian potential. The fields now in production yield more than 300 million tonnes of oil and gas condensate per year, he said — amounting to about half the total Soviet output. But since two thirds of all the fields discovered in the area have not yet been touched, and only one fifth of the oil-bearing region of West Siberia has been explored it is difficult to make reliable estimates of the reserves. Extraction costs, he pointed out, are soaring, the costs of erecting a rig have risen 30 per cent in the last five years, and it has proved impossible to sustain the original growth rate. While maintaining that Western talk about Soviet oil running out in the near future is "highly premature", Nesterov's talk was couched in cautious terms. During the next five years, he said, the Soviet Union will be able to meet its own requirements and its commitments to its trading partners. For the longer term, he gave no hint of any bonanza — shale or otherwise, of the type suggested by Petrostudies. **Vera Rich**