

## NSF: A Boost for Relevance

The new Nixon budget seeks another moderate increase in funds for the National Science Foundation and at the same time gives NSF a further nudge toward helping the Administration carry out its expressed intent of making nonmilitary research contribute more directly to the solution of national problems.

In the fiscal year 1973 budget requests made public this week, about \$100 million in NSF funds would be earmarked for research and development activities focused on social, environmental, and economic problems, including \$22 million for an "Experimental R & D Incentives Program" aimed at stimulating nonfederal investment in R & D. Funds for the RANN (Research Applied to National Needs) program would be increased from \$50 million for the current year to \$80 million under the FY 1973 budget request.

At a budget briefing last Saturday, retiring NSF Director William D. McElroy took special pains to emphasize that, for the third straight year, the largest single program increase would be in basic research support. He apparently sought to forestall any suggestion that NSF was neglecting basic research for applied science.

The total budget request for next year is \$674.7 million, to be obligated, but not necessarily spent, in the coming fiscal year. Since NSF has some \$21.7 million on hand in unobligated funds from previous years, the Administration is asking Congress for new appropriations of about \$653 million, compared with \$622 million in the current year. Support for research in colleges and universities would rise from \$391 million to \$446 million.

Funds in the category of "scientific research project support," which go principally into university research grants, are set at \$275.3 million in the new budget, an increase of \$28.7 million over last year. To put this in perspective, it must be noted that NSF has been shifting to a policy of supporting graduate education mainly through research grants rather than through separate funds for traineeships and fellowships. Funds for graduate student support declined from \$30.5 million in FY 1971 to \$20 million this year and are scheduled to drop to \$14 million in the coming year. The rationale seems to be the Administration's view that, while there is a tight job market in many sectors of science, it is wise to fund research assistantships to attract graduate students to particular fields where jobs exist or there are needs for special types of manpower.

Fiscal year 1973 will not be a big year for Big Science. Some \$3 million is included, however, for the initial development phase of a Very Large Array (VLA) radio telescope. The design calls for a system of 27 antennas, which, according to NSF officials, can be positioned in differing modes along Y-shaped railroad tracks to give the array a 25-mile diameter. Total cost will be an estimated \$70 million. The site is yet to be selected.

The new experimental R & D incentives program will attract special interest because it so clearly bears the Administration trademark. In introducing the budget, McElroy described the program as one "to explore ways of increasing industrial and other nonfederal investment in research and development, speed up the application of R & D results to improve products and services, and increase productivity."

Plans call for NSF to cooperate with the National Bureau of Standards (NBS), which will have \$14 million in its own budget for a parallel program. NBS is expected to concentrate on working with industry, NSF with universities and also with research associations and professional societies. Officials of NSF acknowledge that the program faces potential difficulties with proprietary secrets, patents, and antitrust laws, but say that similar problems have been overcome in the military area and can also be surmounted in domestic research.—J.W.

the Interior Department for new work on environmental problems, transportation, and urban social problems.

Much of the latter bonanza is presumably contained in a package of technological undertakings which the President briefly alluded to in his State of the Union address, and which comprises just about the only new wrinkle in Nixon's entire domestic program for FY 1973. This package holds a proposed increase of \$400 million for R & D in six very specific topical areas and in nearly a dozen federal agencies.

The package will be the subject of a special presidential message to Congress at some date still to be decided, but for now, the new budget reveals these details: obligations for energy R & D would rise by \$88 million to a level of \$480 million; transportation funds, including money for studies of quieter jets and trucks and for advanced urban mass transit, would grow to \$666 million (up to \$210 million); an "apocalypse" package of \$136 million would be applied to efforts to reduce losses of life and property from such natural disasters as hurricanes and earthquakes (\$43 million more than in FY 1972); money for R & D on drug addiction would climb \$10 million to a level of \$60 million in FY 1973; and funds for pilot projects in improved emergency medical care would go from \$8 million to \$15 million.

Finally, as part of this bundle, the Administration wants to give a total of \$40 million to the National Bureau of Standards and the NSF to learn what makes serendipity run. The two agencies would search for new ways to foster support of R & D by sources other than the federal government, and would explore the process whereby new technology is transformed into new markets.

David refused to say whether or not all this was, as it seemed to be, part of the much-heralded program of new technological initiatives assembled partly under the guidance of former SST chief William Magruder, now employed by the President's Domestic Council (*Science*, 21 January). David did go so far as to say that the Domestic Council had made a "special contribution" to the budget-forming process, but whether still more money would be requested as a result of Magruder's labors was "too iffy" a question to answer. And anyway, he said, the content of the President's special message "has not been decided yet."