

Leadership in science education

We reported in April (page 57) and again in this issue (page 53) that the Administration's proposed budget package, passed by both houses of Congress, would eliminate NSF's Science and Engineering Education Directorate (no funding at all is provided for this area except \$9.9 million to cover the second and third year of fellowships previously awarded). We fully agree with the House Committee on Science and Technology description of this proposed action as "unwise and unwarranted." The Administration's proposal flies in the face of mounting evidence of a national crisis in educating sufficient numbers of scientists and engineers to satisfy the country's needs for national security and economic development. The number of physics PhDs granted per year has fallen by 35% over the last decade. Although in this same period the number of undergraduates in engineering has increased by 40%, there are 10% fewer faculty to teach them because of the marked differences in salary between university and industry positions. Meanwhile the Soviet Union, Japan and West Germany are all accelerating their science and engineering education programs and are sharply increasing, rather than decreasing, their production of graduate degrees.

The only justifications offered by the Administration for abandoning NSF's education funding are the arguments that the Foundation's education program represents less than 0.1% of the total national expenditure for education and that the program "goals are at least partially achieved through research support activities."

In its recommendations for NSF appropriations the House Committee on Science and Technology takes issue with the Administration argument, noting that the more relevant statistic is the total expenditure for science and engineering education and that the NSF program has represented a substantial fraction of this figure (one third in the case of science). Both the Majority and Minority members of the Committee independently recommended restoring a reorganized program at a substantial level of funding. The appropriation bills, passed by both houses just before recess, both call for at least some minimum level of funding.

Although there can be differences in views about approaches to funding in this area, there is no question about the need for leadership in addressing this crisis problem. The House Committee clearly enumerated the elements that a successful education program must provide: graduate-level fellowships, undergraduate classroom equipment, training for undergraduate and secondary school faculty, pre-college student science programs and programs for public understanding. Because science education is a key ingredient in both the country's national security and economic development it is clearly the obligation of the Administration to provide the leadership needed in this area.

We trust the White House will soon acknowledge its responsibility by announcing concrete plans of action to resolve this serious crisis.

Harold Davis