NSF Centers: Yes, But . . .

A committee of the National Academy of Sciences has given its qualified endorsement to the National Science Foundation's plans to establish potentially dozens of science and technology centers at universities around the country.* However, the committee repeatedly cautions that the centers should not be funded at the expense of support for individual investigators and warns the foundation not to make a substantial commitment to centers unless its overall budget increases to accommodate them.

The committee, which was chaired by Richard Zare of Stanford University, in fact echoed many of the concerns that have been voiced in recent months by some of NSF's traditional clients in the academic community, who have feared an erosion of support for "small science" if NSF moves too strongly in the direction of large multidisciplinary centers.

These concerns were raised a couple of years ago, when NSF launched a new program to establish engineering research centers around the country. They came up again earlier this year when President Reagan proposed, in his State of the Union Message, several initiatives to increase U.S. industrial competitiveness, including a doubling of NSF's budget over the next 5 years and the establishment of "new, university-based, interdisciplinary 'Science and Technology Centers' that will focus on fundamental science that directly contributes to the nation's economic competitiveness."

According to a 5-year plan developed at the request of NSF director Erich Bloch, NSF hopes to have 80 to 100 centers in operation by 1992, but only if the foundation's overall budget doubles over the next 5 years. Bloch is said to have told the committee that although such an expansion would triple the number of NSF centers, they would still account for less than 10% of the foundation's total budget.

In part to help allay the concerns, Bloch asked the Academy for guidance on how the foundation should go about establishing the new centers. The committee told him that centers are potentially a good idea, but gave Bloch no overall blueprint for what individual centers should look like, suggesting that they will differ according to the area of research. Their budgets, for example, could range from $500,000 to $10 million a year, though they would typically be expected to cost NSF $1 million to $5 million. However, the committee recommended some common features, including stable funding, integration into academic programs, and opportunities for intellectual exchange with researchers in other fields and in industry, government, and other sectors. To ensure that they are not kept in business beyond their useful life, funding should be limited to 9 years, and outside committees should review their programs every 3 years.

As for NSF's administration of the centers program, the committee argues for a separate budget and a new program office. Proposals should go through a two-stage review, the first designed to judge the quality of the proposed research and the second to determine whether the work to be done justifies the establishment of a center.

That said, the committee offers what it calls "some cautionary observations."

Among them are the following:

■ To prevent short-changing traditional grantees, increasing support for centers should be only in the context of a budget for NSF that is rising overall.

■ Centers will compete with individual investigator projects for university resources such as land, buildings, and tenured faculty positions. They therefore have the potential to place additional strains on internal university relationships.

■ "Sometimes the best science can be done at the interfaces of disciplines, sometimes not. It would be unfortunate if the Science and Technology Centers program induced able scientists to abandon important problems simply because they are not regarded as sufficiently cross-disciplinary to be funded under the program."

■ To guard against a narrow focus on near-term commercial technologies, "there should be no requirement that science and technology center applicants have the prior assent or support of industry."

■ "The funding of one or two centers in a relatively small scientific field could concentrate a large fraction of the talent, weakening other institutions and reducing healthy competition." ■ COLIN NORMAN

Science and Technology Centers: Principles and Guidelines, National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, DC 20418

Indictment of Beggs Dropped

"You may not believe this, and I still find it hard to believe myself," says James Beggs, the former administrator of the National Aeronautics and Space Administration (NASA), "but they made no investigation of any contracting experts at the Department of Defense before they brought the indictment."

Beggs was forced to leave his job at NASA in 1985 when he and his previous employer, General Dynamics, were charged with criminal fraud. The U.S. attorney's office in Los Angeles accused Beggs and three other executives of overbilling the government on a military contract. The aim of the project was to build a prototype of the Sergeant York antiaircraft gun.

General Dynamics built the prototype for $39 million, but lost the competition for the production contract. In the end, the entire project was cancelled. The U.S. attorney's office claimed that General Dynamics got an extra $3.2 million for cost overruns on the prototype by illegally padding other accounts with the Pentagon.

On 19 June, the government dropped the case after a year and a half because it lacked evidence of any intent to deceive. Beggs says it had become obvious in recent months that prosecutors never had proof of wrongdoing—just a theory about how defense contracts ought to work.

On 22 June, Assistant Attorney General William Weld called reporters in for a rare event: an official admission of error. "The government is standing up and saying, 'We were wrong.' " According to Weld, the prosecution stumbled onto new material in 82 forgotten boxes at a U.S. Army arsenal. The boxes turned up after lawyers for General Dynamics filed a Freedom of Information request. Inside were documents revealing that the company had not violated its agreement with the Department of Defense. Nevertheless, Weld said he was baffled by a system that asked for an antiaircraft gun, but, as he put it, agreed to pay $39 million even if it received "a bucket of bolts."

Beggs almost forgives the Justice Department its ignorance. "Defense contract law is a thin area of the law," he says. "There aren't many case precedents, and relatively few lawyers practice in this area." He thinks his career was damaged, but not irreparably. The "saddest thing for me" was being absent from NASA at the time of the Challenger accident, "when the agency needed me most." But he is "not mad at the little guys" in the Justice Department. What concerns him is the failure of higher-ups to review the case. He is "very distressed" by the weakness of the grand jury system, saying, "They could indict Santa Claus on Christmas Eve."

As for the shuttle, which has been in trouble since his departure from NASA, Beggs says: "In warm weather, I would cheerfully fly on it tomorrow with the system as it is." ■ ELIOT MARSHALL