

How well it does could prove critical in determining NSF's future budget for math and science education at the precollege level.

Support for systemic reform comes mainly from the congressional committees that appropriate funding, in particular the panel chaired for the past 6 years by Senator Barbara Mikulski (D-MD). Last May, when NSF chose Baltimore and eight other cities for USI awards, Mikulski presided over a press conference that also featured John Gibbons, the president's science adviser.

Thanks to a long record of peer-reviewed awards, NSF so far has successfully managed to avoid so-called "earmarks" from individual legislators interested in obtaining systemic reform funds for their districts. "NSF is driving the educational programs, not Congress," says one staffer. "And NSF has the reputation of looking at its programs on merit rather than politics."

The program has also attracted the attention of the panels responsible for authorizing NSF spending. The explosive growth in NSF's educational activities led Representative Rick Boucher (D-VA), outgoing

chair of the House Science, Space, and Technology science subcommittee, to ask the General Accounting Office to examine whether the foundation was managing the programs effectively. The report, completed in June, recommended that NSF find better ways to evaluate its efforts but uncovered no serious problems.

"The growth in these programs has been more rapid than this committee is comfortable with," says the congressional aide. "But we know NSF appreciates the value of evaluation." The larger question, he adds, is whether the foundation can demonstrate an improvement in student achievement: "They must think carefully about what they are trying to measure, because [improvement] is the long-term goal." Williams says he hopes to see the first signs of such progress next year, although NSF officials add they are not sure what form that will take.

The new Republican Congress is likely to take a tough look at NSF's centralized effort to force change at the local level. NSF officials still wince when they recall the 65% cut in the education directorate's overall fund-

ing in the first year of the Reagan Administration on the grounds that such activities are the responsibility of the states. But many observers believe that systemic reform is less ideologically offensive to Republicans than is a typical Department of Education grant because of its emphasis on evaluation and benchmarks. "This program is different, and I don't think it will arouse much ire," says one Republican staffer. And Representative Robert Walker (R-PA), the new chair of the House Science Committee, had kind words for NSF's education efforts at a press conference this week.

Williams says he is counting on the support of Republican governors and mayors in many of the systemic-reform states and cities if Congress tries to gut the program. But he's not expecting any huge increase, either. "If the overall NSF budget is not growing, I am positive the education budget is not going to grow," he says. In the meantime, staying the course during the bumpy season ahead is likely to rest on his ability to post clear and convincing yardsticks of success.

—Andrew Lawler

SCIENCE AND THE NEW CONGRESS

Walker Unveils R&D Strategy

Representative Robert Walker (R-PA) may represent the tradition-minded Amish region around Lancaster, but the incoming chair of the House Science Committee has some nontraditional plans for the nation's high-tech future. Last week, in a press conference, Walker made it clear that he would use his position to promote sweeping changes in U.S. science and technology. He said he would try to shift money from applied to basic research, promote hydrogen as an alternative fuel, and take a hard look at research on global climate change.

Walker also plans to move quickly. Early next month the committee will summon the chiefs of science agencies under the committee's jurisdiction to a hearing on the direction of science and technology. "We want to focus not on programs in the next budget, but programs into the next century," he says. Along the way, he would like to abandon what he calls the government's "command and control" approach toward science and substitute methods such as an R&D investment tax credit.

Sitting silently to the side during the press conference was Representative George Brown (D-CA), the outgoing panel chair. "Walker does have some good ideas, but some of them may turn out to be totally off the wall," Brown said the next day at his own gathering with reporters.

One major difference of opinion concerns government-industry cooperation. Walker says he wants to return the National Insti-

tute of Standards and Technology to its traditional mission of helping industry meet its technical challenges rather than pursuing the type of large-scale joint government-industry projects supported by the rapidly growing Advanced Technology Program (ATP). But Brown hopes to fend off Walker's attacks on ATP and related programs by enlisting the support of industry and "weaning away enough Republicans." Walker also wants the National Science Foundation to rededicate itself to supporting basic academic research, presumably trimming or ending the half-dozen or more "strategic" initiatives such as high-speed computing and advanced manufacturing. But Brown feels that the NSF debate is more semantics than substance. "All of the applied science and engineering work at NSF accounts for no more than 10% to 15%," he says.

The National Aeronautics and Space Administration can expect to garner bipartisan support from the new committee. Walker pledged to fight for a NASA budget that keeps pace with inflation—a significant boost above the steady state proposed by the Clinton Administration. That White House plan is "disastrous," agrees Brown, who warned Clinton's chief of staff,



Long view. Rep. Walker wants to focus on "the next century."

Leon Panetta, that he will "raise all kinds of hell" to protect areas like space science in the 1996 budget. But that doesn't mean a free ride for every research program. For example, Walker wants to review NASA's multibillion-dollar Earth Observing System—a planned constellation of satellites—to determine if it is necessary.

The new chair's success in pushing through his agenda will depend in

large part on how seriously the Republicans carry out their pledge to slash the deficit. Although he declined to list specific cuts he would make, Walker spoke of diverting money from one science effort to another rather than reducing overall science funding. Other Republicans, however, have demanded significant cuts, including abolishing the U.S. Geological Survey, the new National Biological Survey, and the Office of Technology Assessment. Walker says he has an open mind on OTA's future. "There probably needs to be restructuring ... but having such a body probably is valuable," he says.

For his part, Brown doubts that USGS will get the ax given its reputation for quality science and its solid record of scientific achievement. "I don't think there's a one-in-a-million chance it will be abolished," he says.

—Andrew Lawler