mittee claims. It would focus attention on the elements of the research budget most likely to keep the nation's science preeminent and its economy robust.

In its report the committee recognizes that trimming the R&D budget by half to accommodate only science and technology would enable deficit hawks to argue that science can get by with less. The committee insists, however, that the proposed S&T budget is a way of protecting what's most important when budget allocations become tighter in the years leading to 2002, the current deadline for achieving a balanced Federal budget. During its deliberations, the committee assumed that the Federal R&D budget as currently defined might shrink by 30% by 2002.

The committee notes that universities now receive about 31% of the $35 billion to $40 billion of S&T funds, while Federal laboratories get about 29% and industry 21%. Under the customary R&D definition, universities get about 17% of the $70 billion total and businesses share the largest proportion, some 45%.

Accordingly, the report recommends that the S&T budget focus on people and projects rather than research institutions and facilities. The report praises university-based research, citing its quality control through the use of peer review, its role in training the next generation of scientists, its early dissemination of new knowledge and its flexibility in accommodating new research directions. Even so, the report notes, "The committee does not presume that academic research is always of higher quality than that conducted in industry, Federal laboratories or other nonacademic institutions."

One of the committee's recommendations specifies that R&D conducted at Federal laboratories "should focus on the objectives of the sponsoring agency and not expand beyond the assigned missions of the laboratories. The size and activities of each laboratory should correspond to changes in mission requirements." The cautionary note is obvious: Federal labs should be downsized or closed if they no longer serve the mission of the funding agency. The committee knows that will not be easy. If individual agencies prove incapable of taking decisive action, an independent commission, similar to the one the Pentagon appointed to close unneeded military bases, "will probably be needed as a last resort," the report contends.

The report avoids pointing to specific programs that could be dropped. Instead, it states, "the budget should be sufficient to serve national priorities and foster a world-class scientific and technical enterprise." To be sure, the White House would need to identify which science and technologies are important to sustain at a world-class level. Even if the US does not lead the world in a specific scientific field or technological area, says the committee, it should be "poised to pounce" if any become significant.

The Senate Appropriations Committee requested the study by the academies in October 1994 after Senator Tom Harkin, an Iowa Democrat who then chaired the labor, health and human services and education appropriations subcommittee, wondered why funding for biomedical research at the National Institutes of Health was increasing more slowly than the rate of inflation. The Senate expanded its request to include an examination of policies and priorities for all Federal R&D. "The study should consider the criteria that should be used in judging appropriate allocations of funds to research and development activities," said the Senate appropriations report. Still, except for stating that the government should be sure that America's science and technology are at world-class levels, the Press committee dealt mainly with policy making rather than priority setting or funding criteria.

The Press panel risked the ire of the Clinton Administration with one of its recommendations. The report expresses skepticism about some technology programs pursued by the Clinton Administration and attacked by the Republican-dominated Congress. The committee doubts that the Advanced Technology Program run by the Commerce Department's National Institute of Standards and Technology is the best way to use scarce Federal R&D dollars and suggests that funds for cooperative R&D would be better spent elsewhere.

John H. Gibbons, President Clinton's science adviser, reacted to the report by noting that the Administration operates just the way the committee recommends—with the National Science and Technology Council, which was organized by Clinton to coordinate R&D funding across the agencies. Gibbons was skeptical, he said in a statement issued at the news briefing in the National Academy's lecture room, that the whole process of funding science would change—or should change. "This report proposes fundamental changes in the process by which we fund science and technology," Gibbons stated. "The Administration has been [at] the forefront of this kind of change, and I can tell you from experience that it will not be an easy task. It will be particularly difficult for the Congress to embrace the changes in the budget process called for in this report."

Indeed, the panel never makes a truly convincing case that its proposals will assuage the fiscal crisis of S&T. The committee urges no upheavals or unpopular reforms. Priorities may need reordering and Congress and the science community require some self-discipline. It's a familiar story.

This is not the first cry for change. In 1989 the Academy issued a similar report. In 1993 the academy's Committee on Science, Engineering and Public Policy said that the goal of Federal research should be world leadership in important selected fields and world-class abilities in all fields. The new report also revives a recommendation of the 1993 panel for five-year reviews of how US efforts stack up to those of the rest of the world.

IRWIN GOODWIN

The report is available for $27.00 each (plus $4.00 mailing charges for the first copy and 50¢ for each additional copy) from the National Academy Press, 2101 Constitution Avenue NW, Washington DC 20418. It also can be accessed at http://www.nas.edu/nap/online/.

House Science Chair to Retire from Congress

Representative Robert S. Walker of Pennsylvania, the first Republican to head the House Committee on Science, is full of surprises. Urbane and a snappy dresser, he likes to display his folksinging talents while strumming a guitar at political rallies. He is a licensed race-car driver and a Corvette buff. Though he represents Amish and Mennonite farm settlements in Pennsylvania, Walker is a true believer in the power of science and technology to transform and improve society. Still, the most surprising thing about Walker took place on 15 December when he summoned the news media to his committee's hearing room to announce that he will not seek re-election in 1996.

The congressman, who turned 53 the week after his startling statement, said he had no "hidden agenda" in his decision. "It's just time to move on," he told reporters. "In case there are any rumors," he said in answer to a question, "I'm in excellent political and physical health. Sometimes you have to take people at their word on why they do things, and I really do believe this is the right time for me to do something else with my life."

Walker said he decided to retire after 20 years in Congress to maintain a 220-year tradition in his Pennsylvania Dutch district. No one has ever represented the region in Congress more than 20 years, he claimed. ■