Democrats Boost R & D

Democrats and Republicans are engaged in a bidding war to determine which party should be regarded as the patron of science and technology. President Reagan opened in January with a budget that would provide large increases in selected areas of R & D. Now the Democrats have raised the stakes with a budget resolution—approved by the House on 23 March—that would increase Reagan's request for nondefense R & D by $1.25 billion.

The House passed the resolution the day before the annual AAAS colloquium on R & D and the federal budget, a fact that led AAAS president Margaret Burbidge to remark that "the political climate today is reminiscent of that in the late 1950's and 1960's with science and technology hot political items."

As a guide to what will actually be spent, the Democrats' resolution is no more reliable than Reagan's budget, which was cast aside by Congress almost before the ink had dried. But the two proposals together indicate that R & D is definitely back in political favor, with both parties looking toward science and technology as a key to economic growth.

The budget resolution, it should be noted, is only the first step in Congress's Byzantine budget process. The Republican-controlled Senate has yet to produce its version of the resolution, and differences with the House then have to be ironed out. Even the final resolution's figures are not cast in stone, for individual budgets have to be approved by the usual appropriations process.

Nevertheless, the House budget resolution is an important political milestone, as is evident from the vigorous campaign mounted by the Reagan Administration to defeat it. In the R & D area, about half the proposed increases over the Reagan budget would go to energy programs. This represents a major difference of opinion between the Democrats and the Administration over the government's role in supporting applied research and development. In essence, the Administration argues that much of the Department of Energy's applied research should be done by private industry. The Democrats maintain that in areas such as conservation and renewable energy, federal support is needed to ensure that technologies are developed. The Democratic budget resolution would also provide a major boost to the National Science Foundation, adding some $250 million to the Administration's request, which itself would provide an 18 percent increase over this year's budget. The extra money would be used for science education ($150 million) and a program to upgrade instruments in universities and colleges ($100 million). The extra helping for science education reflects passage by the House last month of major legislation for a science education program split between NSF and the Department of Education (*Science*, 11 March, p. 1198).

The resolution also includes an extra $150 million for NASA's civilian science programs, an amount that includes funds "to initiate the acquisition process for a fifth shuttle orbiter," according to the House Budget Committee report on the resolution.

As for the National Institutes of Health (NIH), the resolution would add $200 million to Reagan's request. The Administration proposed virtually no increase for NIH, a fact that has caused a good deal of concern in the scientific community over the Administration's apparent bias toward the physical sciences. In fact, the White House Office of Science and Technology Policy was pushing for an increase in NIH and thought that the Office of Management and Budget had agreed. At the last moment, however, OMB decided to hold NIH constant, partly because it expected Congress to increase the budget anyway. Its expectation seems to have been borne out.

Although the Administration's budget request was fast being rendered obsolete by congressional action, it was given a detailed examination at the colloquium and in a background paper prepared by the AAAS and its member societies. Most participants seemed to agree with the chief author of the background paper, Willis Shapley, that the budget "has some rough edges but is a good one for science." The Democrats' budget resolution was considered even better.—**COLIN NORMAN**

solution that Beggs will not countenance is a degradation in ST's performance. "Tell me now," he has consistently told his ST team, "what do you have to have to make this program well?"

At this writing the answer is still not clear; to some extent it will be a trade-off of money versus time. The overruns could range from $100 million to $250 million or more, and the delays could range from 1 to 2 years. Beggs told Boland that he could probably handle the costs in fiscal 1983. But next year, because he was not told the truth last October when the fiscal 1984 budget was being devised, he will have to carve out some $20 million to $40 million from the rest of NASA's space science.

Solar Optical Telescope has already been cut back to the bare bones. The prime contractor is none other than Perkin-Elmer, and Beggs wants that company's attention focused in one direction only. The Advanced X-ray Astronomical Facility (AXAF), ST's counterpart in x-ray astronomy, will almost certainly be slipped for the simple reason that NASA cannot credibly ask for another space telescope while the first one is in such disarray. For the remainder, Beggs intends to work his way through the rest of the Office of Space Science and Applications, picking up a million dollars here and there as he can.

Boland asked about "pillage." (Scientists have bitterly referred to "The Slaughter of the Innocents.") "There's no question that it is going to hurt," replied Beggs, "but it's the only place I've got to go for money." At this time there are no plans to ask for a budget amendment, he added, although Boland appeared to leave the door open. OMB has certainly made it clear as a general policy that new money will be very hard to come by.

Ironically, ST is one of the few programs in NASA that OMB has never stinted; the agency has always gotten pretty much what it asked for. The problem is that no one on the project knew how to forecast what they really needed.

It is hardly a situation unique to ST. "We've been working on the edge," Beggs told Boland, referring to NASA's overall performance in the last decade. "We've been pushing the state of the art with insufficient reserves to handle contingencies and inadequate backup on critical technologies." He pointed to a stinging in-house critique of NASA management produced in 1981 (the "Hearth" report): "Its message is to get back to the fundamentals of sound management. We still don't do enough of that."

—**M. MITCHELL WALDROP**