There is certain to be more 11th-hour pleading from legislators and lobbyists as the budget clock winds down, and there are persistent rumors of a multibillion-dollar reduction that OMB must apply to one or more agencies. At press time, NSF and NIH officials were still negotiating specific programs, but other agencies seem to have tied up their loose ends in preparation for the president's submission to Congress. Here are some details of the DOE and NASA budgets:

Energy Department. Any researcher who expected DOE's basic research to reap a windfall from the death of the $11 billion SSC is likely to be disappointed by the president's budget; indeed, Clinton is expected to ask for a slight reduction in DOE's baseline science and technology programs. Meeting last month with the directors of DOE's national laboratories, Secretary O'Leary indicated the Administration's request for science and technology at the agency will be about 14% lower than in 1994, a cut that would mostly come from the SSC. Its shutdown costs in 1995 are estimated at $180 million, which follows $640 million appropriated in 1994.

The rest of the science and technology programs O'Leary highlighted—a breakout that comprises $2.3 billion of the total $3.3 billion budget for energy research—would remain essentially flat under the request, dropping $20 million (less than 1%) from 1994. At the briefing, which was first reported in *New Technology Week* and confirmed by *Science*, O'Leary said that, because of inflation, level funding will force lab directors and department managers to trim some programs. One exception is Princeton's proposed Tokamak Physics Experiment, the next step in magnetic fusion, which is scheduled to get a $44 million boost to $64 million.

NASA. The 1995 budget is expected to bring especially bad news to space scientists not associated with the Earth Observing System. A disproportionate share of the $250 million cut in NASA's current $14.5 billion budget would come from the $1.8 billion now being spent on space science—astrophysics, astronomy, and planetary missions. The $475 million life sciences and microgravity program is considered relatively safe because it represents the principal scientific justification for the space station. In response to warnings of pending reductions, researchers asked NASA to "fence off" two programs that most directly threatened the space science budget—the space station, scheduled to get $2.1 billion a year for the next several years, and the shuttle, which this year received almost $3 billion—and let them compete with each other for a fixed pot of money. NASA agreed, but the downside is that it will be just as hard for space science to steal money from other programs as it is for others programs to steal from space science.

Such pressures are forcing NASA to make tough choices. For example, preserving the multibillion-dollar Cassini probe to Saturn could delay until 1998 a replacement mission for the failed Mars Observer (see p. 167) or force NASA to substitute a series of smaller, cheaper probes.

Now that the Clinton Administration has picked its winners and losers, it will be Congress's turn to play the zero sum game with the 1995 budget. The final results will be tallied next fall.

–Jeffrey Mervis, Christopher Anderson & Eliot Marshall

U.S. SCIENCE POLICY

OSTP Plans a Blueprint for Research

One month after the Clinton Administration took office, it issued a detailed document on technology policy, outlining a new role for the federal government in supporting R&D likely to benefit the U.S. economy (*Science*, 26 February 1993, p. 1244). The statement was followed by sharp increases in funding for some areas of applied research. Now M.R.C. Greenwood, the top science official in the White House Office of Science and Technology Policy (OSTP), is laying the groundwork for a similar policy blueprint for basic research. As a first step, Greenwood, the former dean of graduate studies at the University of California, Davis, has invited 125 scientists and policy experts to Washington for a no-holds-barred discussion of the government's role in funding science.

"The time has come to reevaluate, and reaffirm, the importance of science in achieving national goals," Greenwood said in an interview with *Science*. "We're asking them to tell us what we need, and what the policies are that will get us there. What they say, we hope, will become part of the Administration's policy statement on fundamental science."

The meeting, scheduled for 31 January to 1 February at the National Academy of Sciences (NAS), will be called the "Forum for Science in the National Interest: World Leadership in Basic Science, Mathematics, and Engineers." The participants, drawn from the ranks of government, universities, and industry, will tackle a half-dozen questions that OSTP has posed—on such issues as the role of graduate education, the changing nature of research, and the proper distribution of funds by type of investment (investigator-initiated, mission-oriented, education and training, facilities, international collaborations, and so on). They will also hear speakers from a range of backgrounds, including at least two legislators with influence over funding federal science: Sen. Barbara Mikulski (D–MD), chairman of the appropriations subcommittee that funds the National Science Foundation (NSF), the National Aeronautics and Space Administration, and the Environmental Protection Agency, and Sen. Jay Rockefeller (D–WV), chairman of the science subcommittee of the Commerce, Science, and Transportation Committee.

RICK KOZAK

Town meeting. OSTP's Greenwood hopes for new strategy for science.

The forum will be the first public event for the new federal coordinating committee on fundamental science, one of nine interagency bodies OSTP has established to help manage the government's $75 billion annual investment in R&D (*Science*, 16 September 1993, p. 1513). The committee is chaired by NSF director Neal Lane and Harold Varmus, director of the National Institutes of Health, and is composed of top-level research administrators from a dozen agencies.

Greenwood has spent the past month talking up the idea among policy makers in Washington. Organizations such as NAS, the Carnegie Commission on Science, Technology, and Government, and the American Association for the Advancement of Science (which publishes *Science*) have agreed to help foot the bill for the meeting, and several federal agencies have signed on as cosponsors.

The idea has also generated some skepticism, however. Erich Bloch, a former NSF director now with the private-sector Council on Competitiveness, helped during the presidential campaign to prepare a document on technology policy that formed the basis for the Clinton Administration's technology manifesto, issued on 22 February last year. Now he is worried that Greenwood and others haven't thought hard enough about what they want to accomplish at the 2-day meeting. "It's better to start with something and then ask for comments," he says. "But this is democracy

gone too far. I'm afraid that such a large group is more likely to come up with the usual arguments about the importance of science and the need for more money."

For David Robinson, who oversaw a series of reports by Carnegie on science, technology, and the federal government, the key question is whether the goals of science and the goals of society can be blended. "We can be world leaders in basic science without meeting our national needs," he says, referring to the title of the forum. "And we can achieve a national goal without being the world leader in that field. The trick is to merge those goals."

Greenwood acknowledges that there is a danger the meeting could turn into a gripe session in which researchers and their lobbyists attack federal spending on basic research. But she says she hopes participants will offer a broader vision to help counter a growing public feeling that research is a luxury the country can no longer afford. "I don't know that you can prevent a group like this from doing some special pleading," she says. "What you can do is to try to structure the meeting for some honest discussion. The intellectual backlash that the country is experiencing is a very real threat to the long-term health of scientific research. But rather than looking back at what's worked in the past, we need to look forward to what we can do to improve the quality of life of our citizens and to provide for our children."

Greenwood says she expects the forum to generate a series of position papers for the coordinating committee to discuss at future meetings. The end product, she hopes, will be a new national strategy for science—and a rallying cry for researchers to explain what they do and why it deserves funding.

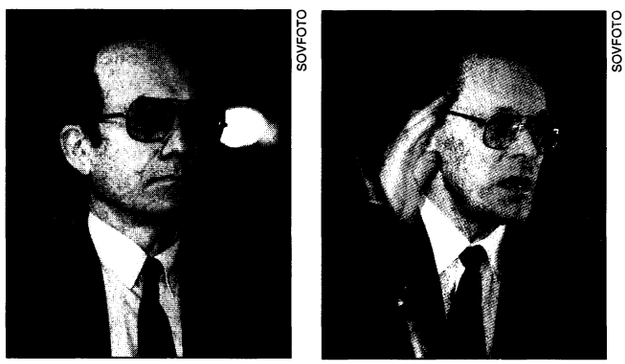
–Jeffrey Mervis

RUSSIAN SCIENCE

Battle Expands Over Shrinking Budget

MOSCOW—While the votes were being counted in last month's general election, in which reformists took a surprising battering, a new round of infighting broke out between conservatives and reformists over the future of Russian science. In this struggle—unlike in the general election—the reformists so far seem to be holding their own.

The latest skirmish was sparked when the presidium of the Russian Academy of Science (RAS)—generally considered among the old guard of Russian science—blamed the near terminal health of Russia's basic research on the Ministry of Science and Technological Policy and called for the ministry to be abolished. Its accusations and recommendations generally echoed those put forward in early fall by Nikolay Malyshev, science adviser to President Boris Yeltsin. Minister of Science Boris Saltykov—generally regarded as a reformist because he has been trying to introduce peer review into some science funding decisions—hit back just after Christmas, accusing RAS president Jury Osipov, an applied mathematician, and Malyshev of trying to win the support of scientists by making inaccurate accusations. "There are no simple solutions to complicated problems," Saltykov said. Behind this war of words is a struggle for control over Russian science.



Vying for control. Boris Saltykov *(left)* and Jury Osipov.

The verbal shooting began when Malyshev drew up recommendations for the president on the restructuring of state bodies in charge of science and education. He vehemently attacked the Ministry of Science, accusing Saltykov of building up the staff of the ministry although its only job is to allocate funds. The direct management of most basic research institutes is the job of the RAS.

Now Osipov has piled on, endorsing Malyshev's claim that Saltykov's attempt to introduce competitive funding into Russian science has been completely inefficient. Saltykov created the Foundation for Basic Research (FBR), the first western-style funding agency in Russia, and the move is seen by many as a positive reform of the old Soviet system. But its activities have been hampered by infighting, and Saltykov's opponents now claim that by diverting money to the FBR, the ministry is starving RAS institutes of their basic core funding, which covers their overheads and salaries, leading to a "termination of research" in some centers. Osipov also accuses the Ministry of Finance of holding back funds that have already been promised to RAS institutes. By the middle of December, he says, the ministry had paid only one-third of what was due to the RAS in the last quarter of 1993.

Malyshev and Osipov both call for the Ministry of Science to be disbanded and for financial responsibility for allocating core funding to pass to the RAS. Control of the FBR, they say, should be given to state committees, such as those for industry or defense industry. To look after the broader administrative aspects of science policy, both men favor setting up a new body: a ministry or state committee of science and education that would "supervise the strategic development of science without getting into niggling wardship" of scientific institutions.

In an interview just after Christmas, Saltykov totally rejected the claim that the ministry had been starving the RAS of funds. Eighty percent of the trillion-rouble (about $790 million) science budget for 1993 had been paid to scientific institutes, he said. Although $153 million is still owed, Saltykov said that he had reached an agreement with Prime Minister Viktor Chernomyrdin that the RAS's budget would be paid more promptly in the new year. The science budget for the first quarter of this year will be the same as the last quarter of 1993, Saltykov said, and he called on the RAS to unite with the ministry in demanding that science get a fair deal from the state, rather than blaming each other for the famine of funds.

Saltykov also denied that he was trying to do away with core funding and replace it with competitive grants. Rather, Saltykov says he is seeking to combine core funding with selective funding of research projects based on competitive grants from bodies like the FBR. Additional finds will come from international research contracts and the selling of licences.

The minister was particularly scathing about his opponents' proposals for reforming the system. He argued that the RAS could not be given exclusive control of core funding because it is principally a learned society and the Russian constitution gives the right to conduct state policy only to state bodies.

So far, Yeltsin and Chernomyrdin have not said whether they intend to restructure the Ministry of Science. Saltykov's changes to the funding system are, however, generally in line with Yeltsin's reforms in other areas, and Saltykov can at least take comfort from one development this week: As *Science* went to press, Yeltsin announced a reshuffling of government ministries, and the science ministry was not abolished.

–Andrey Allakhverdov

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