as work on cancer vaccines and basic molecular virology of a distant HIV relative, HTLV-1. More alarming still to this group, only $11 million goes to R01s for preclinical vaccine research. "The 'discovery engine' for AIDS vaccines is presently a 50-cc two-stroke model, which is attempting to power a Cadillac," admonishes the draft report.

Part of the problem, the subpanel argues, is that R01 grants for vaccines often are not considered to be "cutting-edge science" by the NIH "study sections" that review them. To help correct this, the subpanel recommends that NIH form a study section devoted to vaccine research, rather than sending these proposals to sections that focus on, say, immunology. Another fix suggested by the subpanel is to gut NCI's $14.8 million intramural AIDS vaccine program. Estimating that "up to half" of that money has not been spent on AIDS vaccine research, the subpanel "strongly" recommends a "major reduction in funding for NCI" and feels "most strongly that an expert peer review of the entire vaccine research program administered by NCI was essential."

The subpanel that focuses on so-called "targeted" research, for its part, suggests that research at the primate centers, which receive about one third of the $40 million spent on targeted work, should be centrally coordinated. Currently, there is "immense confusion" about the meaning of animal studies with vaccines, because they have been done under different conditions and cannot be compared. And, for reasons this draft report doesn't clarify, the subpanel recommends that NIH find $25 million to $50 million each year in new money for what is described vaguely as "an expanded" targeted AIDS vaccine effort. The full panel report says this might include vaccine production by the government, rather than industry.

The third arm of the vaccine group is analyzing the $42 million that NIH claims to spend annually on AIDS vaccine clinical trials—an amount the panel says is probably "seriously overstated" because of "inaccurate reporting and coding." This subpanel comes down hard on HIVNET, a $16-million-a-year network of researchers set up mainly to lay the groundwork for HIV vaccine efficacy trials at domestic and international sites—none of which are currently on the drawing boards at NIH. "A serious danger is that, in the absence of a vaccine efficacy trial, HIVNET will undertake trials of other interventions [such as counseling and vaginal microbicides] without adequate review of the need for such studies," says the draft report from this group, which suggests cutting HIVNET in scope or even folding it into another program.

Clinical trials. *Science* obtained only the executive summary from this panel, so the reasoning behind its recommendations remains sketchy. One big recommended change is to fold all four clinical trials networks now being sponsored by NIAID into what the panel considers the best of the lot, the AIDS Clinical Trials Group (ACTG), which tests new treatments at 30 academic medical centers spread across the country. In addition, the panel pointed out that several other NIH institutes besides NIAID also test experimental treatments and preventive strategies in humans, and it said it was "distressed that there is no overall coordination." To resolve this shortcoming, the panel "strongly recommends" that NIH set up a clinical trials oversight committee.

This draft executive summary is especially critical of AIDS clinical trials funded by the National Institute of Neurological Disorders and Stroke, which the panel charges is not "committed" to evaluating neurological manifestations in AIDS and also does not "express a responsibility" to do neurologic evaluations of people in ACTG trials.

Insiders say the working group will not water down these draft reports. In fact, "we're pushing them to be tougher," says working group member Bloom. "I'd be astonished if the final report was weaker than the drafts." The working group is also urging the panels to be more realistic about money matters. "Everyone wants more resources, but no one wants to put anything on the chopping block," says one person close to the process who asked not to be identified by name.

The panels have had a hard time finding candidates for the ax, however, in part because they have found it difficult to unravel how NIH's intramural program spends AIDS money. "You can only hit what you can see, and the intramural program is good at hiding things," complains one panel member, who also requested anonymity. Another catch is that some programs the panels have recommended cutting from the AIDS budget are going to have to find NIH money elsewhere. Take the call to move some of the $10 million spent on chimps into monkey studies. "There's no logistical way of doing it and making sure the chimps are maintained," says Judith Vaitukaitis, head of NCRR. "We just can't abrogate our responsibilities."

Once the final report is written, it must be approved by the OAR's advisory council. NIH institute directors will then work with OAR to help it write an "implementation plan." If they can turn that around quickly, OAR's Paul believes they may be able to influence the 1997 budget request, which still is in limbo because of the battle between Congress and the White House over the 1996 budget (see p. 589).

Although some panel members say they are far from convinced that NIH has the backbone to follow through on their recommendations, Paul dismisses those worries. "There's no good having a report if we don't do anything about it," he says. The clock will start ticking soon.

–Jon Cohen

OCEANOGRAPHY

Hearing Highlights Hopes, Realities

In a rare departure from the partisan rancor of the past year, members of three congressional committees last week declared their commitment to oceanographic research in tight fiscal times. Speaking at a 4-hour session that was part pep rally and part reunion, legislators from both parties agreed that ocean sciences deserve more attention—even if they can't have more money.

RICK KOZAK

In the swim. Leading scientists and federal officials urged Congress to support oceanography.

The hearing was convened by subpanels of the House science, resources, and national security committees, each with jurisdiction over ocean programs. The goal was to find common ground among legislators, federal officials, and researchers at a time when the overall budgets of many of the agencies that fund ocean sciences—in particular the Navy and the National Oceanic and Atmospheric Administration (NOAA)—are taking a dive.

Representative Curt Weldon (R–PA), who chaired the hearing as head of the military research subcommittee that oversees some $35 billion in defense R&D, emphasized the need for dual-use technology that would benefit both civilian and defense sectors. The heads of the several research agencies who testified—from the National Science Foundation as well as the Navy and NOAA—let legislators know about the importance of ongoing programs. And former Energy Secretary James Watkins, a retired admiral who is now president of the university-based Consortium for Oceanographic Research and Education, took the opportunity to promote his idea for a leader-

ship council to coordinate national ocean sciences policy.

Each idea was received warmly by those in attendance. Although Weldon ruled out any significant increase in funding, he told *Science* after the hearing that "the time is right, and now I'm in a position to force [the Navy] to open up these resources to the widest possible audience." Indeed, testimony from Admiral Jeremy Boorda, the chief of naval operations, suggested that the service has already heard his message.

Boorda endorsed the continued release of formerly classified satellite information (*Science*, 3 November 1995, p. 727), and announced that "I promise in future budgets to keep funding [for ocean sciences] at least at current levels." The Navy has decided to operate a fleet of eight research vessels, he said, a figure that's "down from where we once were [12 ships] but higher than the [original downsizing plan]."

As head of the agency experiencing the most financial pressure, NOAA head James Baker testified about the agency's scaled-back plan to modernize its aging 24-ship fleet—which some legislators want to scuttle. The plan, now under White House review, calls for reducing the fleet through a combination of government, industry, and academic vessels "that will give us the most cost-effective way to go to sea." Its price tag, Baker added, "is less than half" the $1.9 billion proposed in 1993 (*Science*, 8 July 1994, p. 176). The agency is also completing a report requested last fall by the Senate on the impact of decommissioning or sharply reducing the size of the fleet.

Even so, Baker's words did little to disarm Representative Dana Rohrabacher (R–CA), chair of the House environmental panel that co-sponsored the hearing and one of the agency's harshest critics. "Isn't there some way the Navy can provide you with some help so that we don't have to have a NOAA fleet?" he asked in one of the few sour notes sounded at the hearing.

For Watkins, the hearing was an opening move in his bid to give the field the visibility and popular support now enjoyed by the nation's space science programs. "The papers are filled with stories about colliding nebula and dark matter," he fumed at one point. "But none of that is going to help us solve problems here on Earth." Several legislators echoed his complaint, with Weldon griping that ocean science "has taken a back seat" to space in the science committee and throughout Congress.

In the meantime, Weldon hopes to increase federal-private partnerships in ocean science. Earlier in the week he traveled to Newport, Rhode Island, for the first of a series of field hearings with academic and industrial researchers. A second hearing this spring in Washington will pave the way for legislation, he says, adding that the House leadership and even the vice president's office have endorsed his efforts. "It's nice to have bipartisan support for something," commented one senior Democratic House aide. "We haven't seen too much of that lately."

–Jeffrey Mervis

ENERGY RESEARCH

Panel Would Close Princeton Reactor

A panel of fusion experts has reluctantly concluded that, if there's no increase in the fusion budget, the Department of Energy (DOE) should close a record-setting fusion reactor so that the United States can remain part of an international fusion experiment. The recommendation has won tentative support from DOE officials, who say it is unrealistic to expect more money.

The review was requested by DOE managers after Congress slashed the department's current magnetic fusion budget from $366 million to $244 million. In 6 weeks, says Michael Knotek of the Battelle Pacific Northwest Laboratory, who led the review for the Fusion Energy Advisory Committee, "a really frantic effort" among a small team of academic and industry officials cobbled together consensus on a restructured program (*Science*, 19 January, p. 282). The team preferred the highest of its four funding options—$275 million a year—but it devoted most of its attention to maintaining a budget of $250 million.

At $250 million, Knotek's team said, DOE should halt operations next year at the Tokamak Fusion Test Reactor (TFTR) at the Princeton Plasma Physics Laboratory, which in 1994 achieved a record output of fusion power. Part of the savings should be used to maintain U.S. participation in the first phase of the International Thermonuclear Experimental Reactor (ITER) at current levels, the panel said, and DOE should also increase spending on plasma science and tokamak alternatives. TFTR had been slated to shut down last year in preparation for a new facility, the Tokamak Physics Experiment, but those plans were canceled when TPX was scrapped.

If the budget falls significantly below $250 million, Knotek warned, "we would have a very serious conflict" that would damage both the U.S. domestic program and its international commitments. That level of funding, says Marshall Rosenbluth, a committee member and physicist at the University of California, San Diego, "would tear the program to pieces" and force the United States to renegotiate its ITER design agreement with its European, Russian, and Japanese partners. In addition to forcing the closure of TFTR, a smaller budget would likely also shut other domestic facilities.

"If we decouple from ITER, it's an irreversible act. We would be adrift."

—Michael Knotek

But some say the panel has overestimated what could be accomplished with $250 million. The figure does not take into account an estimated $13 million to terminate TFTR, says DOE fusion chief Anne Davies. She also warned the panel that a proposal to save money by cutting DOE's fusion office in Washington might not help bench scientists around the country.

Martha Krebs, who is in charge of DOE's energy research office, says that "the recommendations, particularly at the $250 million level, are something that can be supported and defended" given budget constraints. And Knotek insists that the tilt toward ITER at the expense of the domestic program is a necessary move. "If we decouple from ITER, it's an irreversible act," he warned. "We would be adrift."

However, critics believe that shutting down the Princeton facility to preserve a U.S. role in ITER, which may not be completed for well over a decade, would be a dangerous gamble. "That's a leap of faith [in ITER]," says committee member J. R. Thompson, an aerospace manager and a former Princeton and National Aeronautics and Space Administration official. And Joseph Gavin, former president of Grumman Aerospace, blasted DOE and the fusion community for accepting the severe budget constraints in the first place. "A national asset is going to slip away from us if this panel doesn't stand up," Gavin warned. Gavin and Thompson voted against accepting the report's conclusions, but the remainder of the 15-person panel approved the results.

Knotek says the new plan will give fusion supporters the ammunition to fight off further cuts to the program, although he acknowledged that the community's lobbying attempts in the past have proved "less than dismal." The next step for DOE is to sell the Administration and Congress on a 1997 fusion budget that is small enough to be seen as fiscally responsible but large enough to keep the U.S. program intact.

–Andrew Lawler