

►NSF's annual budget request to Congress for major facilities should be based on the road map. The budget request should "include the proposed yearly expenditures over the next 5 years for committed projects and for projects that will start in that period. The request should also include a rank ordering of the proposed new starts."

►Once a project is funded, there should be "disciplined periodic independent review . . . by a committee that includes internal and external engineering and construction experts."

►To ensure that potential international and interagency collaborations are considered, the Office of Science and Technology Policy "should have a substantial early role in coordinating

road maps across agencies and with other countries."

Brinkman said that OSTP Director John Marburger consulted closely with the committee in developing the report. The committee also looked at the US Department of Energy's process for developing its 20-year road map for large science projects (see *PHYSICS TODAY*, January 2004, page 23).

An NSF spokesman said the foundation was reviewing the report and was not ready to comment. Brinkman said NSF Director Rita Colwell and other NSF officials had been briefed by the committee and "they rightfully have to sit and look at this. There are some tough things they have to do."

Jim Dawson

both among large projects and with big versus small," says Carty. More generally, he adds, "I will always be taking the pulse of the science community in universities and colleges, industry, and the government R&D community to find out their needs and aspirations."

Toni Feder

Carty Named to Canada's New High-Level Science Post

The day he was sworn in as Canada's prime minister last December, Paul Martin announced the creation of a national science adviser post. Stepping into the new shoes on 1 April is Arthur Carty, a synthetic chemist and president of the National Research Council (NRC) of Canada.

News of the resurrection of a high-level science post is being heartily welcomed by Canada's science community. Three decades ago, the country had a science adviser to the cabinet—not, as now, to the prime minister. Martin also named Joe Fontana, a long-time member of parliament, to be parliamentary secretary for science and small business, another new position.

The moves are seen as evidence of the government's commitment to science and technology and as a means to improve both the decision-making process in S&T and the communication between the science community and policymakers—and, by extension, the public. A couple of years ago, when Martin was finance minister, says Béla Joós, president of the Canadian Association of Physicists, "he was the most sympathetic person in government to arguments that the prosperity of modern nations depends on high technology. Therefore, having him now as prime minister is the best thing that could happen to the science community."

Having a national science adviser "is an excellent development," adds Pekka Sinervo, a high-energy physicist and dean of arts and sciences at

the University of Toronto. "[Carty] is a very well-respected administrator, an excellent bench scientist in his own right, and understands the Ottawa scene very well. People are cautiously optimistic. It will depend on how Carty is on influencing and steering policy and his relationship with the prime minister. These are unknowns."

A UK native, Carty went to Canada in the 1960s. He served on the faculty of the University of Waterloo for 25 years, including a stint as dean of research, before becoming NRC chief a decade ago. He continues to maintain an active research group.

In his new role, Carty will counsel the prime minister on S&T issues. A key thrust of the government is to commercialize research advances—and to climb from 14th to 5th place worldwide in per capita R&D spending by the end of the decade (see *PHYSICS TODAY*, May 2003, page 25). Canada has increased R&D funding significantly over the past few years, says Carty. "That has to be continued and, if possible, enhanced." Reaping the benefits of investments in fundamental research, he adds, "is not going to happen automatically if you ignore the innovation end."

Setting funding priorities for science, defining and securing Canada's role in the international science arena, and establishing mechanisms for dealing with big science are also on Carty's agenda. "We haven't got a transparent process for evaluating big science in the context of comparing

Flatten Succeeds Lerch as APS International Affairs Director

On 2 February, Amy Flatten became head of international affairs at the American Physical Society. She took the torch from Irving Lerch, who stepped down last December, 11 years after founding the program.

After earning her PhD in 1993 from Georgia Tech for research on polarization-preserving optic fibers as

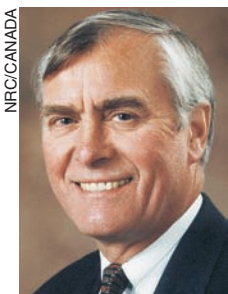


Flatten

Lerch

acoustic sensors, Flatten became a high-tech consultant. In one job, she led a team that designed a prototype of a ballistic missile alert communications system. In another, she looked at the impact of telecommunications systems on business. "I found that I enjoyed the bigger questions more than I enjoyed the detailed questions of the lab," she says. At the same time, she adds, "I missed the international picture." So she moved first to the US Department of Commerce, where she worked with industry and government on international telecommunications policy development, and then to the White House Office of Science and Technology Policy (OSTP), where she spent five years before joining APS. She plans to continue teaching on the side at Johns Hopkins University, as she has done for nearly a decade.

At OSTP, Flatten promoted international collaboration in S&T. Among other things, as the office's lead on US-Russian relations, she worked with government representatives to smooth the way for scientific collaborations on peaceful issues between former Russian nuclear scientists and US researchers. That culminated last



Carty

NRC/CANADA

APS

November in a memorandum of understanding in high-energy and nuclear physics.

Also while at OSTP, Flatten initiated and oversaw all aspects—from fundraising to recruiting and directing international agencies' participation—of the annual Global Science and Technology Week, intended to stimulate schoolchildren's interest in math and science. In addition, she provided policy recommendations and analysis for the president's science adviser and worked on S&T issues with the United Nations Educational, Scientific and Cultural Organization (UNESCO), the Organisation for Economic Co-operation and Development (OECD), and other international organizations.

It was Flatten's immediate boss at OSTP who told her about the opening at APS. "During a meeting one day," says Flatten, "she nudged me and handed me her BlackBerry™," which displayed an announcement of the position. "I wasn't chomping at the bit to find something outside of OSTP, but when this came along, it was a perfect fit. Promoting international scientific collaborations is a long-term career goal of mine. The opportunity to dig in and focus on that, and to launch initiatives and see them through, exactly meets my interests and objectives."

Lerch remains active in the international science policy arena. For now, he is planning an April workshop in Azerbaijan on science teaching and research in central Asia and the Caucasus. As a consultant for UNESCO and other organizations, he is involved in setting up a series of workshops on rebuilding the science base in Iraq. And he is keeping an eye on developments at home, where, he says, "there are a lot of forces impeding the free exchange of information and the circulation of scientists. We are creating a very viscous system for scientists coming to the US."

Toni Feder

Geoscience Job Market Good, but Perceived as Bad

The job market for recent PhDs in Earth and space sciences remained strong for the class of 2002: 88% are working in their field and describe their jobs as challenging and relevant, according to a recent report by the American Geological Institute, the American Geophysical Union, and the American Institute of Physics.

In 2002, 54% of new PhDs became

postdocs, a slight increase over 49% from the previous year. The job hunt took a median of two months for postdocs and four months for nonpostdocs.

For PhDs working in academia, listings in newsletters, magazines, and journals were the most effective job resource. Across all sectors, however, "informal channels" led to the most jobs, according to the report. Starting salaries ranged from less than \$35 000 for academic postdocs to \$75 000 for industry positions (see figure on page 34).

Among Earth and space scientists who entered the private sector in 1999–2002, the largest fraction (39%) were hired by the petroleum industry. The rest went to work in nongeoscience companies (20%), environmental consulting (16%), weather and logistics (5%), mining (3%), and other areas (17%).

Despite the robust rate of employment, perceptions of the market were bleaker than in the previous two years. About half of new Earth and space science PhDs said the market was neutral, a fifth said it was good, and a third described it as bad or hopeless.

Earth and space scientists earn their PhDs at an average age of 33, later than scientists in other fields. For comparison, PhD recipients in

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