

Canadian government set to announce new technology programme

Washington. Canada is about to launch a new technology development programme that will allow the government to lend around C\$300 million (US\$225 million) a year to industrial companies to support the development of high-technology products.

The National Technology Investment Programme, known as N-TIP, is expected to be the centrepiece of the Canadian government's long-delayed science and technology policy review (see *Nature* 376, 376; 1995), now due to be released in the middle of next month.

The review may also lead to the creation of a small secretariat at the Privy Council Office — the Canadian government office that supports the cabinet — to coordinate spending on science and technology across the government, as well as an outside board to advise the secretariat.

N-TIP is effectively a successor to the long-established Defence Industries Productivity Programme (DIPP), which is being phased out after funding of C\$140 million this year. The aerospace industry has been lobbying strongly for a replacement programme, particularly the aero-engine manufacturer Pratt & Whitney. But it will also be open to grant applications from other high-technology, export-led industrial sectors.

According to industry lobbyists, the money allocated to N-TIP will not be explicitly allocated to sectors by the government, but awarded to the strongest proposals. That will leave the aerospace companies well placed, given their previous experience with grant applications with DIPP, one lobbyist said.

Universities will be able to become involved in N-TIP through partnerships with industry. But they are still likely to look upon the programme as evidence that the Liberal government gives higher priority to the support of technology than to basic scientific research.

N-TIP grants will be repayable under a royalty scheme if the product developed is successful and profitable. The Canadian cabinet has agreed to the scheme in principle, and annual funding is expected to be between \$C200 million and \$C300 million, tending towards the higher figure if the scheme is extended to include Atomic Energy of Canada's work on environmental technology.

The government hopes that N-TIP will eventually become self-sustaining, on the basis of royalty income received from successful projects. But initial money for the programme will have to come from the existing budgets of the government departments involved.

C.M.

Clinton portrays science as the path to racial harmony

Washington. President Bill Clinton has attacked Republican plans to cut science and technology spending, arguing that such spending can "make real the promise of the American dream" and thus ultimately help soothe the racial tensions now racking the United States.

In a 20-minute address — his first on science in three years in office — delivered at the White House last week, Clinton defended the technology development programmes that have been close to the heart of his administration, and also praised what he called the "persistence and focused intellectual energy" of American scientists.

Before awarding 16 National Medals of Science and Technology, the president pointed out that the budget plans of the Republican-dominated Congress "will cut vital research and development by a third". He added: "We may have a balanced budget to show for it tomorrow, but a decade or a generation from now our nation will be much poorer for doing that."

Much of what Clinton said was familiar — for example, that it is important to strengthen, rather than weaken, US investment in science, technology and research. "We must sustain our universities — a critical national resource and still the envy of the entire world."

But he gave his remarks a new significance by seeking to tie investment in science and technology to the race issue, two days after the Million Man March of black Americans in Washington, which has highlighted the persistence of racial division as America's foremost political problem.

Drastic cuts in science and technology spending need to be resisted, he said, because "constant, churning innovation" is the key to economic growth and national strength in the twenty-first century. "If we're going to make real the promise of the American dream to all Americans — which would plainly do a lot to help us deal with the kind of racial difficulties that we began so bravely as a nation to come to grips with this week — we have to go further in this area."

Clinton's much-heralded science speech contained few clues as to how far he is prepared to go in resisting proposed Republican cuts for the 1996 financial year just begun, which fall most heavily on technology programmes such as the Department of Commerce's Advanced Technology Pro-

gramme and on environmental research.

Indeed, it is not even known when the President and the Congress will finally agree on a 1996 budget; they were supposed to do so by 30 September, and the rescheduled deadline of 13 November is now widely expected to slip. The cuts of one-third mentioned by Clinton are based on estimates by his Office of Science and Technology Policy of the impact of Repub-

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Helping hands: Vice President Al Gore (left) and President Clinton congratulate medal winner Louis Nirenberg

lican plans to balance the budget by the year 2002.

The eight scientists honoured by the president included the chemist Isabella Karl, head of the X-ray diffraction section of the Naval Research Laboratory, who was selected for her development of techniques, now used worldwide, for the X-ray analysis of crystal and molecular structures. Louis Nirenberg, former director of the Courant Institute of Mathematical Sciences at New York University, received a National Medal for his overall contribution to pure and applied mathematics.

The other winners were Thomas Cech of the University of Colorado at Boulder, for work with ribonucleic acid (RNA) enzymes; Hans Dehmelt of the University of Washington, Seattle, who built electromagnetic traps to capture and study subatomic particles; Peter Goldreich of Caltech for planetary science and theoretical astrophysics; Hermann Haus of the Massachusetts Institute of Technology (MIT) for quantum optics; Alexander Rich of MIT for structural biology; and Roger Shepard of Stanford University in California for work on mental imagery.

Clinton and his vice president, Al Gore, also gave out eight Technology Medals. These included one to the company 3M, whose development of the Post-It note was singled out for special praise by the leader of the world's leading industrial economy.

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