

(2) Paragraph (1) of this subsection shall be effective on and after the effective date of section 112(1) of Public Law 101-593 (104 Stat. 2962).

#### SEC. 9. CHESAPEAKE BAY INITIATIVE.

*Section 502(c) of the Chesapeake Bay Initiative Act of 1998 (16 U.S.C. 461 note; Public Law 105-312) is amended by striking "2003" and inserting "2008".*

Mr. REID. I ask unanimous consent that the committee reported amendments be agreed to; the bill, as amended, be read three times and passed; the motion to reconsider be laid upon the table, and any statements be printed in the RECORD.

The PRESIDING OFFICER. Without objection, it is so ordered.

The committee amendments were agreed to.

The bill (H.R. 3908), as amended, was read the third time and passed.

#### NATIONAL SCIENCE FOUNDATION AUTHORIZATION ACT OF 2002

Mr. REID. I ask unanimous consent the HELP Committee be discharged from further consideration of H.R. 4664 and the Senate proceed to its immediate consideration.

The PRESIDING OFFICER. Without objection, it is so ordered. The clerk will report the bill by title.

The legislative clerk read as follows:

A bill (H.R. 4664) to authorize appropriations for fiscal years 2003, 2004, and 2005 for the National Science Foundation, and for other purposes.

There being no objection, the Senate proceeded to consider the bill.

Mr. KENNEDY. Madam President, I am pleased the Senate will consider and pass today, the National Science Foundation Doubling Act. This bill is the product of extensive bipartisan, bicameral negotiations among the House of Representatives Committee on Science, the Senate Committee on Health, Education, Labor, and Pensions, and the Senate Committee on Commerce, Science, and Transportation. It is based on S. 2817, which I introduced with Senator HOLLINGS, Senator MIKULSKI, and Senator BOND. I commend them, together with Senator GREGG, Senator MCCAIN, House Science Committee Chairman BOEHLERT, Congressman NICK SMITH, and Congressman RALPH HALL for their leadership in crafting this important legislation.

NSF performs two key functions for the federal government and the broader research community. It supports basic research and development in math, science, engineering, and technology, and it promotes math and science learning at every level, from K-12 through post-graduate education.

Few people realize how influential NSF has been to their daily lives. NSF has funded basic research leading to the creation of doppler weather radar, retail bar codes, speech recognition software, magnetic resonance imaging machines, and even World Wide Web browsers, such as Netscape and Microsoft's Internet Explorer. NSF education initiatives of the late 1980s

were the forerunners of the standards-based school reform movement embraced throughout the Nation today and most recently in the new No Child Left Behind Act governing nearly all federal elementary and secondary education programs.

We can and should build on NSF's record in improving the lives of millions of Americans. The 20th Century was the era of the industrial age, and the 21st Century will be the era of information technology and the life sciences.

The bill before us doubles NSF's budget authority over the next five years. It matches the growth of the National Institutes of Health over the last five years. We double budget authority for research and development in the physical sciences and theoretical mathematics, because they support advances in the health sciences and because they are valuable in their own right.

I am particularly proud that the legislation before us authorizes a new secondary school systemic initiative at NSF that will develop model school reforms to improve high school student math and science performance and better prepare all students for college-level and technical work. For too long, federal policy has paid scant attention to the needs of secondary school students. Senator JEFFORDS and I have been working extensively in this area. I commend him for his leadership and look forward to continued work with him on the needs of secondary students.

The bill before us supports model math and science partnerships between institutions of higher education and local school districts to improve the knowledge and teaching techniques of current and future math and science teachers. The math and science partnership provisions are based on proposals offered by the Administration, Senator FRIST, Senator ROBERTS, Senator ROCKEFELLER, and Senator BINGAMAN. They track a strong body of educational research that emphasizes the importance of training math and science teachers to improve student performance in those important subject areas.

This legislation supports institutions of higher education in increasing the number of students, particularly women and minorities, who study toward and obtain degrees in science, math, engineering, and technology. Senator LIEBERMAN, Senator MIKULSKI, and Senator BOND are leaders on this issue, and I commend them as well. We have an economic need and a national security imperative to increase the number and quality of students studying science, math, engineering, and technology at the post-secondary level.

Finally, the bill before us reforms NSF's program on major research and facilities equipment, to help prioritize projects and guard against cost overruns and approval of proposals that have not received adequate analysis.

This is an area of concern for Senator CLINTON, Senator BOND, and Senator MIKULSKI, and I commend them for this initiative. Quality and merit should be the touchstones of our Nation's investment in the sciences.

The National Science Foundation Doubling Act is a thoughtful piece of bipartisan legislation that prepares us for the future. I urge my colleagues to support it.

Mr. HOLLINGS. Madam President, today, the Senate will pass legislation that authorizes the doubling of the National Science Foundation budget by fiscal year 2007. As you all know, NSF is the nation's premier federal science agency that invests in basic research across all disciplines. We rely on NSF research to open new frontiers of science, and I am proud that we can pass this important legislation today.

We have approached this legislation in concert with our friends on the Health, Labor, Education, and Pensions Committee, Senators KENNEDY and GREGG. Once again, it has been a pleasure to work with Chairman BOEHLERT and ranking member RALPH HALL of the House Science Committee. Obviously, we could not have produced this product without Senator MCCAIN, Senator ROCKEFELLER, and the other members of the Commerce Committee. We were also pleased to work with our friends, Senators BOND and MIKULSKI, who have been leaders on the NSF.

This doubling bill is vital. The Hart-Rudman Commission on National Security, and former speaker Newt Gingrich, warned that our failure to invest in science and to reform math and science education was the second biggest threat to our national security. NSF is well positioned to address this threat. After all, NSF invests in math and science education from kindergarten all the way through to the post-doctoral level and beyond. This bill allows the Foundation to increase that investment, while reaffirming our commitment to women, minorities, and people with disabilities. These under-represented groups, together, make up more than half of our nation's work force and are only increasing. Letting these groups fall by the wayside would not only threaten our economic competitiveness, but also our national security.

It is often said that more than one-half of our nation's economic growth since World War I has stemmed from technology driven by science. Let me give just one example of how NSF's investments can spur our economy. NSF is the leading agency in the National Nanotechnology Initiative.

Nanotechnology—which is the science of manipulating matter at the atomic and molecular level—will cut across every scientific discipline, including materials and manufacturing, healthcare and medicine, energy and the environment, agriculture, biotechnology, information technology, and national security. Worldwide, the market for nanotechnology is expected

to be \$1 trillion annually within 10 to 15 years. NSF's cross-disciplinary approach, which includes groundbreaking research into the way society and this new technology will interact, will help this nation take advantage of Nanotechnology sooner, better, and with greater confidence.

Finally, I want to note that NSF is responsible for the overall health and well-being of the research enterprise in this country. Congress is now completing its 5-year commitment to double funding for the National Institutes of Health. We made that investment because we want to cure and prevent disease. But increasingly, it's not just the biomedical research that NIH supports that brings us breakthroughs. Recent advances in biomedical science have relied on advances in fields such as computer science, physics, and chemistry. For example, the sequencing of the human genome was enabled by powerful computers networked in innovative ways. The commitment that we are making today to science at NSF will build our base knowledge in non-medical fields to complement the research done at NIH.

NSF research is not just for large universities. The Foundation's continued support for the EPSCoR program supports the development of the science and technology resources of individual states like South Carolina, through partnerships that involve the state's universities, industry, government, and the Federal research and development enterprise. These partnerships put researchers in these states in a better position to compete and win NSF grants.

Mr. President, I think these arguments are solid, simple, and straightforward. We can talk about NSF's past outstanding contributions to science. We can talk about the future and the importance of science and technology to our economy. But, Mr. President, where the rubber meets the road, we have to stop talking and invest, with real money, in the science and engineering enterprise that will guaranty the health, economic viability, and security of our future. I, for one, appreciate the hard work that NSF has done over the past 52 years promoting the progress of science, and I thank my Senate colleagues for supporting me in providing this agency the resources needed to conquer tomorrow.

Mr. LIEBERMAN. Madam President, I am proud with my Senate colleagues, particularly Senators KENNEDY, GREGG, and HOLLINGS, in expressing support for this historic legislation, which will help ensure that our country continues to be a leader in scientific and technological innovation. I also want to extend my appreciation to Chairman BOEHLERT of the House Science Committee for his leadership in moving this strongly bipartisan legislation.

The reality is that technological and scientific innovation is now widely understood to be the major driver of economic growth, not to mention a crit-

ical factor in our military superiority. Education is essential to ensuring that the American workforce possesses the skills necessary to meet these innovation needs. The provisions included in this legislation will help give universities and colleges in Connecticut and nationwide the tools they need to boost our domestic pool of brainpower—the next generation of people who will incubate and implement the next generation of ideas to expand our economy.

I am extremely pleased that the bill passed today includes all of the key elements of the Technology Talent Act of 2001 S. 1549, legislation that I and my colleagues, most notably Senators MIKULSKI, BOND, FRIST and DOMENICI, first proposed a year ago today. The Technology Talent Act of 2001, "Tech Talent Act", sought to stimulate economic growth by boosting the number of math, science, technology and engineering graduates from U.S. institutions of higher learning. House Science Committee Chairman BOEHLERT introduced similar legislation in the House, H.R. 3130, on October 16, 2001.

In keeping with the Tech Talent Act, the National Science Foundation Act of 2002 "NSF Authorization Act" approved today establishes a framework for a multi-year competitive grant program that would award performance-based grants to institutions of higher learning to increase the number of math, science, technology and engineering graduates. The legislation will formally authorize an existing program at NSF that was inspired by and modeled after Tech Talent Act—the Science, Mathematics, Engineering, and Technology talent Expansion Program, STEP. STEP, has already received Federal appropriations for fiscal year 2002 and elicited more than 170 applications from interested colleges and universities, of which 16 were awarded grants. I am pleased that Naugatuck Valley Community College in my home state was selected to be one of the first grantees under the program and have every confidence that it will lead the Nation in developing creative and effective ways to build a 21st century workforce.

The provisions in the NSP Authorization Act before us today achieves the same goals as were proposed in my Tech Talent Act. The following analysis describes the growing talent gap that threatens America's leadership in science and technology and clarifies the goals, concepts, and themes underpinning both my original legislation and the STEP, or Tech Talent, provisions of the NSF Authorization Act.

America's technological prowess is unequalled in the world today—which is why, despite our economic slowdown and the financial burdens of prosecuting the war against terror and ensuring our collective defense, we still have the strongest, most vibrant economy on the planet. However, our long-term competitive standing and economic security could well be at risk if we do not address a troubling trend

line in our workforce, the mismatch between the demand and supply of workers with science and engineering training.

Studies show that the number of jobs requiring significant technical skills is projected to grow by more than 50 percent in the United States over the next ten years. But outside of the life sciences, the number of degrees awarded in science and engineering has been flat or declining. This has helped fuel a well-chronicled shortage of qualified New Economy workers.

We have tried to temporarily plug this human capital hole with a stopgap of foreign workers. Unfortunately, there is a broad consensus among high-tech leaders and policymakers that it would be a serious mistake to prolong this dependence and essentially render our GDP contingent on the supply of H-1 B visa holders.

That may sound like a bit of an overstatement to some. But the reality is that technological innovation has been a key enabler of our economic and military dominance over the last half century. It is widely acknowledged, moreover, that we cannot continue to expand our economy in the future if we don't take steps now to expand our domestic pool of human intellectual capital.

Now, most answers to serious economic challenges flow from the private sector, which is where growth must occur. But there are things that the Federal Government can do to help, particularly when it comes to educating and training our workforce. We can provide leadership, focus, and not least of all resources, and that was the purpose of the Tech Talent Act as introduced, and STEP as is included in this NSF legislation.

Specifically, the Tech Talent program aims to fix a critical link in this "tech talent" gap—undergraduate education in science, math, engineering, and technology. As established in our bill, it would provide competitive grants to institutions of higher learning, from universities to community colleges, to encourage them to find creative methods for increasing the number of graduates in these disciplines.

This is not another scholarship program, but a targeted, results-driven initiative that goes straight to the gatekeepers. We're not asking them to change their admissions policies, but, in effect, to design new missions. Come up with effective ideas, and we will provide the dollars to make them work.

For example, institutions could propose to add or strengthen the interdisciplinary components of undergraduate science education. Or they could establish targeted support programs for women and minorities, who are 54 percent of our total workforce, but only 22 percent of scientists and engineers, to increase enrollment and graduation numbers in these fields. Or they could partner with local technology companies to provide summer industry internships for ongoing research experience.

This initiative was conceived with strong bipartisan, bicameral support. The Tech Talent Act, as noted, was introduced last year by Senators MIKULSKI, BOND, FRIST, DOMENICI, and myself; the House companion bill, H.R. 3130, was introduced by House Science Committee Chairman BOEHLERT and Representative LARSON. By the end of the year, Congress had agreed to appropriate \$5 million for this fiscal year to jumpstart the program in the form of NSF's STEP, even though our authorizing legislation had not yet been passed. Most recently, the Senate VA-HUD Committee Appropriations bill for fiscal year 2003 included \$20 million for the program.

The program also has extremely broad support outside the Congress. The Administration has supported Tech Talent as a priority, including funding for it in its budget request for FY 2003. In addition, the response from leaders in industry, academia, and educational communities, also has been tremendous, we have received letters of support from TechNet, Semiconductor Industry Association, National Alliance of Business, K-12 Science, Mathematics, Engineering & Technology Coalition, American Association of State Colleges and Universities, Texas Instruments, and the American Society for Engineering Education, to name but a few.

Even more encouraging are the preliminary data obtained from NSF's STEP. NSF received 177 applications requesting a total of \$59.7 million in aid, clear evidence of the vast interest in, and need for, the Tech Talent program among undergraduate institutions seeking to implement reforms in science and math education. In its first year, the program has awarded 16 grants to colleges and universities.

The NSF Authorization Act passed today will do much to enhance the efforts already underway at NSF in this area and to permanently establish "Tech Talent" as a national priority. I want to make clear the intent of a few provisions in this legislation as their implementation will be critical to the success of the program.

The intent of H.R. 4664, expressed in section (8)(a)(7)(A), is to prioritize funding for programs in fields of science, mathematics, engineering, and technology that have witnessed a period of stagnant or declining enrollment and degree conferrals, especially where such declines have resulted, or are likely to result, in adverse social, economic, technological, or military costs. It deserves clarification that a declining trend can be indicated not only through an absolute decrease in the number of students enrolling or graduating in a particular field, but through a relative decrease in the proportion that students of a particular field constitute relative to the total number of students enrolled or graduating across all fields.

For example, statistics from the National Science Foundation, NSF,

demonstrate that between 1985 and 2000, the number of bachelor's degrees awarded declined from 77,572 to 59,536 in engineering, and from 16,270 to 14,580 in the physical sciences. Furthermore, the NSF predicts that the number of jobs requiring skills and backgrounds in information technology will vastly outstrip the number of people capable of filling such positions over the next decade. The negative consequences of such trends with respect to economic growth, technological innovation, and gainful employment have been widely documented and should represent near to medium-term priorities for Tech talent funding.

In emphasizing the need to remediate stagnant or declining trends, we recognize and appreciate previous criticisms regarding the difficulty of accurately modeling future employment scenarios and of forecasting areas of societal need. Nevertheless, we believe that investments must bear a relationship to desired outcomes if limited funds are to be allocated intelligently. The NSF is therefore expected to undertake efforts to the best extent it can to identify and account for broader social considerations, including generally anticipated industry requirements or imbalances between the number of students graduating across different fields, in determining fields appropriate for prioritization. To this end, the NSF may require applicants to specify the specific societal needs being addressed by their proposals and to articulate how such proposals would further the remediation of targeted needs.

The fundamental goal of the Technology Talent Act as introduced was to increase the number of graduates with expertise in math, science, technology and engineering to meet the critical needs of our U.S. businesses, industries, research community and military. As such, the intention of sections (8)(a)(7)(B) and (8)(a)(7)(D)(i) of H.R. 4664 is to require applicants to clearly establish measurable targets to both increase the number of students studying toward degrees in science, mathematics, technology and engineering, and to increase the number of students who have completed degrees, concentrations, or certificates in these fields. Therefore, it is intended that applicants that fail to establish goals for both enrollment and completion shall be considered inadequate.

Likewise under section (8)(a)(7)(D)(ii), it is intended that the Director shall terminate funding in the case of a grantee that has failed to make substantial progress toward meeting the targets established in section (8)(a)(7)(D)(i) for increasing the number of students completing degrees, concentrations or certificates in science, mathematics, technology and engineering. However, I would encourage the Director to work with grantees and provide technical assistance to help ensure that grantees make substantial progress during the first three years of the grant toward meeting the

targets established in (8)(a)(7)(D)(i) and to achieve such targets by the end of the grant period. I further believe that it is inherent in this legislation that grantees that successfully meet their targets established in (8)(a)(7)(D)(i) shall be eligible to compete for subsequent grants.

I believe that this NSF bill provides a real boost to efforts that are being undertaken in parts of the country to address our technical workforce challenge. As such, it is the intention that innovative consortias between institutions of higher education and non-profits, industry or state or local governments are eligible to compete for grants under the STEP program per section (8)(a)(7)(F). In particular, I believe that legislation under (8)(a)(7)(F)(iii) allows for non-profits established on behalf of such high-quality and proven consortias to apply directly for grants.

For example, the State of Texas passed legislation last year that created a consortium—the Texas Engineering and Technical Consortium, TETC, among private industry and 32 colleges and universities to increase the number of students graduating from Texas schools with degrees in electrical engineering and computer science. Grants are awarded to universities and colleges to support curriculum changes, bridge programs, and various forms of student and faculty support to help increase the retention rate of students pursuing degrees in these areas and to attract and retain more underrepresented groups. This collaborative effort has received funding from Advance Micro Devices, Texas Instruments, Hewlett Packard, Motorola, Intel, Applied Materials and Sabre, with in-kind support from AeA and TechNet. The state matches private and other contributions up to \$5 million per year.

In April, grants worth \$5.3 million were awarded to fund 33 projects as 23 institutions. The appeal of this program is that industry, academia and the state are working cooperatively and collaboratively to address a pressing workforce need, rather than on a school-by-school or company-by-company basis. While it is still too early to determine the success of these projects, which were funded at 64 percent of the potential grant amount, the institutions are projecting a 13 percent increase in total student numbers in these programs for fall 2003. If fully funded, that increase could go as high as 23 percent. This is just the type of innovation that the Tech Talent is meant to encourage.

Finally, the real success the version of the "Tech Talent" program encompassed in this legislation will be based on the successful replication and expansion of model programs supported through this grant program at all of our higher education institutions. Therefore, I believe it is critical that the Director follow the intent of the original language as introduced in S.

1549, section (5)(a), and H.R. 3130, section (4)(d), and select an independent evaluative organization to develop metrics for measuring the impact of the program, particularly on the number of students enrolled, academic performance of students, persistence to degree completion, and placement in post-graduate education or career pathways, and to identify the program approaches assisted under this program that are the most effective in increasing the number of students obtaining degrees in science, mathematics, technology and engineering.

In addition, both S. 1549 and H.R. 3130 intend for the Director to regularly disseminate information on the activities conducted by grantees and the results of programs assisted under this grant program, including best practices, to participating institutions of higher education and other interested institutions of higher education. Similarly, I believe it is imperative to share the findings of programs assisted under STEP grants with Congress through interim and final reports so that we may make better policy decisions to enhance our nation's standing as a scientific and technological leader.

We all realize that solving the undergraduate problem is not going to single handedly close our talent gap. At the same time, we should also realize that the talent gap cannot be closed without first solving the problem at the undergraduate level. Therefore, I am pleased by the Senate's unanimous support today for the NSF Authorization Act of 2002, and the STEP, or Tech Talent, provisions encompassed therein. In doing so, we will be helping to ensure that the young minds of today will be capable of mastering and fueling the high-tech economies of tomorrow.

Ms. MIKULSKI. Madam President, I rise today to join with Senator KENNEDY, Senator HOLLINGS, Senator GREGG, Senator MCCAIN, and Senator BOND to urge passage of the National Science Foundation Doubling Act.

On July 12, 2002, Senator KIT BOND and I joined together and called on our Senate colleagues to join us in an effort to double the budget of the National Science Foundation over five years. We said at that time, that just as we worked collectively to double the NIH budget, now was the time for a parallel effort on behalf of the fundamental research supported by the NSF.

NSF's impact over the past half century has been monumental—especially in the field of medical technologies and research. The investments have also spawned not only new products, but entire new industries, such as biotechnology, the internet, and e-commerce. Medical technologies such as biotechnology, the internet, and e-commerce. Medical technologies such as magnetic resonance imaging, ultrasound, digital mammography and genomic mapping could not have occurred, and cannot now improve to the next level of proficiency, without underlying knowledge from NSF-sup-

ported work in biology, physics, chemistry, mathematics, engineering, and computer sciences.

Today, with this bill, we take an important step to ensure the well-being of this Nation and its citizens with passage of this bill to double the funding for the basic research and science education activities of the National Science Foundation over the next five years.

Some might ask, "Why should we do this now?" Let me try and answer that question.

We have seen some dramatic increases in research and development investments during the past decade, largely from industry. These investments have contributed to this country's standing as a global economic powerhouse.

However, according to the National Science Board—in its latest report on science indicators—developments abroad could affect U.S. preeminence in the years to come. The Board says that the United States finances 44 percent of the total worldwide investment in R&D—equal to the combined total of Japan, the United Kingdom, Canada, France, Germany and Italy.

But other nations are increasing their R&D investments and focusing on areas such as physical sciences and engineering, which receive comparably less funding in the United States. Those changes could lead to the creation of new centers for research excellence abroad, which will encourage many of those who have come here from other countries and have become a part of our science enterprise to return home.

The fact is that this country's future competitiveness rests on our ability to develop a U.S. work force that has the skills necessary to meet the increased competition coming from abroad.

In this country, R&D investments by U.S. industry have contributed to a steady stream of innovations and economic growth. We are seeing new partnerships develop that connect firms and universities, nonprofit organizations and government.

Meanwhile, the balance of R&D investments continues to shift. As industry R&D grew to nearly 75 percent of the national total by 2000, Federal expenditures remained essentially flat over the past decade.

At the same time federal research expenditures in life sciences have grown, from 41 to 47 percent of the federal total between 1990 and 2000. However, the combined share of physical sciences and engineering in federal research total dropped from 37 to 29 percent in the same period.

Changes in the U.S. economy have spilled into the workforce. Information- and technology-based changes in the economy have created new opportunities for highly trained workers.

Science and engineering occupational fields are growing faster than the overall growth of the American work force.

the Bureau of Labor Statistics predicts that during this decade, hi-tech occupations will grow by 47 percent, compared to 15 percent for the labor force as a whole.

Despite many state and national reforms initiated during the last decade, the quality of mathematics and science education at the precollege level is not where it should be. America's high school students continue to lag behind in international achievement measures in science and mathematics. U.S. high school students taking physics lag behind students in Norway, Sweden, the Russian Federation, Denmark, Germany, Australia and seven other countries.

A persistent issue in science and mathematics education remains the size and adequacy of the teaching force. According to the National Commission on Mathematics and Science Teaching for the 21st Century, the nation's schools will need to hire 2.2 million teachers, including 240,000 middle and high school mathematics and science teachers, in the next decade.

The need for teachers is most pronounced in urban and rural areas and within specific disciplines and grade levels of mathematics and science. A survey of urban school districts, by the Council of the Great City Schools and Recruiting New Teachers, Inc., in 1998–99, indicated that up to 95 percent of our urban school districts had an immediate demand for high school science and mathematics teachers.

A high percentage of science and mathematics teachers lack even a minor in their teaching field, with 56 percent of public secondary students receiving instruction in the physical sciences from teachers without a major or minor in the physical sciences. And as many as 50 percent of new teachers in urban school districts leave the teaching profession within their first three years, further exacerbating shortages.

Solving the problem of producing more high-quality, homegrown scientists and engineers—and a well educated workforce—depends upon solving the math and science education problems we have at the elementary and secondary levels of our school system.

The bill before us today authorizes substantial growth in all areas of basic research—including the physical, engineering, biological, and computer sciences—fields vital for progress in just about every other area of science including biomedical research. The bill also puts a high priority on cutting edge programs such as information technology, nanotechnology and plant genome research.

Under this bill, the NSF budget would grow from today's level of \$5 billion to nearly \$10 billion by fiscal year 2007 which should allow for substantial growth in both the size of the average award as well increase the number of awards NSF is able to make. Increasing the size of the grants will benefit those currently conducting research. Increasing the number of awards should help

those individuals who are just starting their careers in science as well as attract more women and minorities into our science and technology enterprise.

In the area of math and science education, the bill firmly establishes the President's Math and Science Partnership program at the National Science Foundation. This is a new effort designed to create strong connections between state and local school districts with our institutions of higher education.

This bill also includes a provision for a new undergraduate "tech talent" program. The "tech talent" program is designed to provide financial support to undergraduate students to pursue bachelor degrees in science and engineering—all in an effort to help meet today's and tomorrow's workforce needs.

The funding in this bill will also help increase the graduate student stipends in both the NSF fellowship programs as well as in the support graduate students receive as research assistants on the NSF research grants. Under this bill, NSF's entire education and human resources program would grow from \$875 million in fiscal year 2002 to almost \$1.8 billion by fiscal year 2007.

Finally, this bill includes two provisions that relate to the National Science Board. These are "good government" provisions that give the National Science Board, the policy making body of the Foundation, the authority and funding to hire its own staff. Our rationale is to ensure that the Board remains independent with respect to its policy making and oversight responsibilities. This is particularly important as Congress attempts to double the NSF over the next five years. Finally, it is equally important to know that these provisions do not preclude the Board and the NSF from continuing to work closely together as they have over the years such as in the staffing of NSB committees, subcommittees, and task forces and the development of the biennial Science and Engineering Indicators report.

As a Nation, we have a big challenge ahead of us as we enter the new millennium. Our world has changed and we must do what is necessary to meet the new challenges that will surely come our way. The sustained and effective investment in our Nation's research and education enterprise is one of the keys to meeting those challenges. I urge all my colleagues to join us in enacting this important investment in the future of our country.

NSF REAUTHORIZATION: NSF DOUBLING ACT

Mr. HARKIN. Will the Senator yield for a question?

Mr. KENNEDY. I would be happy to yield to the Senator from Iowa.

Mr. HARKIN. I see that in this legislation, there is an authorization for the Plant Genome Project, a program that had previously been authorized only in appropriations acts.

Mr. KENNEDY. That is correct.

Mr. HARKIN. Is the intent of the managers in including this provision

merely to provide a permanent authorization for the Plant Genome Project, and not to state a preference by the Senate for plant genomics over other agricultural genomics programs when it comes to additional funding provided through appropriations?

Mr. KENNEDY. The Senator is correct. That plant genomics language included in the NSF doubling legislations is only to establish an authorization, it does not state a preference for plant genomics over other agricultural genomics programs that might be provided through later appropriations acts.

Mr. HARKIN. I thank the Senator. I think that is an important point because Senator LUGAR and I worked hard in the Agricultural Research, Extension, and Education Reform Act of 1998 to authorize an agricultural genomics program administered by the National Science Foundation because we felt a balanced genomics program was essential to keeping U.S. agriculture productive and competitive.

While I think the plant genomics program is an excellent one, I sincerely hope that any further increases provided for agricultural genomics be open to animal and microbiological research as well, not just plants. We need a balanced portfolio of agricultural research to best capitalize on the resources devoted to agriculture-related genomics research. I would not want anyone to think that the Senate was now backtracking on the progress we made with the passage of the 1998 agricultural research legislation.

Mr. KENNEDY. It is certainly not the manager's intent to limit the Agricultural, Research, Extension, and Education Reform Act of 1998.

Mr. HARKIN. I thank the Senator for that. I thank the Senator for yielding.

Mr. REID. I understand Senators KENNEDY, GREGG, and HOLLINGS have a substitute amendment at the desk; I ask that that amendment be considered and agreed to, the motion to reconsider be laid upon the table; the bill, as amended, be read three times and passed; the motion to reconsider be laid upon the table; the title amendment be agreed to; and any statements be printed in the RECORD with no intervening action or debate.

The PRESIDING OFFICER. Without objection, it is so ordered.

The amendment (No. 4958) was agreed to.

(The amendment is printed in today's RECORD under "Text of the Amendments.")

The bill (H.R. 4644), as amended, was read the third time and passed.

The amendment (No. 4959) was agreed to, as follows:

Amend the title so as to read: "An Act to authorize appropriations for fiscal years 2003, 2004, 2005, 2006, and 2007 for the National Science Foundation, and for other purposes."

ORDERS FOR FRIDAY, NOVEMBER 15, 2002

Mr. REID. Madam President, I ask unanimous consent that when the Senate completes its business tonight, it stand in adjournment until tomorrow at 9:45 a.m. I further ask that on Friday, immediately following the prayer, the morning hour be deemed expired, the Journal of proceedings be approved to date, the time for the two leaders be reserved for their use later in the day, and there be a period of morning business until 10 a.m. with the time equally divided between the two leaders or their designee; and that at 10 a.m. the majority leader, Senator DASCHLE, or his designee be recognized.

Further, that the live quorum with respect to cloture motions filed with respect to the Homeland Security Act be waived.

The PRESIDING OFFICER. Without objection, it is so ordered.

#### ARMED FORCES TAX FAIRNESS ACT OF 2002

Mr. REID. Madam President, I ask unanimous consent that the Senate proceed to the consideration of H.R. 5557, which is now at the desk.

The PRESIDING OFFICER. The clerk will report the bill by title.

The legislative clerk read as follows:

A bill (H.R. 5557) to amend the Internal Revenue Code of 1986 to provide a special rule for members of the uniformed services and Foreign Service in determining the exclusion of gain from the sale of a principal residence and to restore the tax exempt status of death gratuity payments to members of the uniformed services, and for other purposes.

There being no objection, the Senate proceeded to consider the bill.

#### TAX STATUS OF SERVICE PERSONNEL ON DIEGO GARCIA

Mr. BAUCUS. The distinguished Senator from Louisiana, Ms. LANDRIEU has raised an issue with respect to the legislation before us. That legislation, H.R. 5557, deals with tax benefits for military service personnel. Senator LANDRIEU would like clarification from the Administration on the status of service men and women on the Island of Diego Garcia. These service personnel have participated in military operations as part of Operation Enduring Freedom and will participate in future military operations from that location. There is a question whether these members of the armed forces are entitled to be treated in the same manner as if such services were in a combat zone.

Mr. GRASSLEY. Let me respond to the distinguished chairman on this point. At the request of the Senator from Louisiana, our staffs made inquiries of the administration on this question this evening. In discussion with Treasury officials, our staffs have been assured that the Treasury Department will look into this matter and work