and some on the other side and the media say it is. Some of our Democratic colleagues would like Americans to believe that the document confirms what the Democrats believe—that the war in Iraq is simply a distraction from and has nothing to do with the war on terror, and that is the reason for the growth of radical Islam. This is simply a pitiful election year misinterpretation of a serious document.

It is clear that critics want Americans to have only a portion of the truth. That is unfortunate, but that is what happens when some people simply see intelligence matters as another tool to aid them in the fall elections.

As I said, I have seen the NIE, which is a lengthy 35-page document. It remains classified, so we cannot discuss its contents, although the President announced that some of it will soon be declassified.

Although it is a shame that dishonorable leakers have put us in this position, I believe declassifying the relevant portions of the document so that the American people will have a more balanced perspective on what the document truly says is necessary.

The fact is the war on Iraq is a central front in the struggle against radical Islamists. Our successes in Afghanistan and Iraq have made us much safer in our homeland. There have been no attacks since 9/11. We have destroyed their safe havens, interrogated detainees, tracked terrorist financing, and listened in on al-Qaida calls in the U.S., followed up by agency, law enforcement, and military personnel.

Iraq is not a distraction from the war on terror; it is now central to the war on terror. You don't have to take my word for it; that is the word of Osama bin Laden's primary deputy, Ayman al-Zawahiri. He wrote this to the late head of al-Qaida in Iraq, Zarqawi. We intercepted that in a raid months ago. So their deputies echoed the sentiments.

They believe the war in Iraq is their best chance in the war on terror, and I believe that once you see more of the NIE, you will see it conveys that message with a warning that if we lose in Iraq, terror threats from radical Islamists will dramatically increase.

There is no greater motivation than success. If the radicals are able to claim success in Iraq, I believe we will see a geometric increase in radical recruitment as we have never seen before.

At first, Democrats argued that Iraq had nothing to do with the global war on terror. Now they are grasping at a selectively leaked portion of an NIE, claiming that Iraq is central to terrorism because of our efforts there. You cannot have it both ways. Does Iraq or does it not have something to do with the war on terror? It is clear it does.

Iraq supported terrorists before the war, and terrorists are there now. Iraq was a state sponsor of terrorism and paid the families of suicide bombers. Was Iraq the primary backer of al-Qaida? No, but Saddam Hussein supported terrorism, and that is what this is about—all groups who use terror to attack America. And they must be dislodged.

In April, about the same time the NIE was produced, current CIA Director Michael Hayden, then the Deputy Director of National Intelligence, best summarized why Iraq is crucial to winning the global war on terror. In his speech in Texas, he addressed the subject we focus on today. He said that while the war in Iraq may inspire or motivate terrorists now, the failure of the terrorists in Iraq would weaken the movement elsewhere.

He continued saying that, should jihadists leaving Iraq perceive themselves, and be perceived, to have failed, fewer fighters would step forward to carry the fight.

He went on to explain the terrorists' greatest vulnerability—the fact that the terrorists' ultimate goal of establishing an ultraconservative religious state spanning the Muslim world is unpopular with a vast majority of Muslims.

General Hayden stated that the emergence of a Muslim mainstream, such as the one we are building in Iraq, could emerge as the ''most powerful weapon in the war on terror.''

Whatever one believes about how we got where we are now, one thing is clear: The war in Iraq and the global war on terror are part and parcel of the same thing.

Some on the other side of the aisle, and some in the media, may try to use selected leaks and political spin and half truths to cynically win votes in the election, but their efforts grossly distort reality.

If we win in Iraq, moderate Islam wins and bin Laden and other extremists will have been handed a sound defeat that will have profound repercussions.

The terrorists realize this. That is why they are there, and that is why we are fighting them on their turf before they have the opportunity to regroup and assault us on our turf.

There is no way the United States can afford to let the terrorists have their way in Iraq. That means we cannot cut and run, or establish a politically driven withdrawal date, before Iraq's security forces can control the country. Were we to do that and were the place to fall into chaos, not only would sectarian strife arise, but it would become a training ground and feeding ground for terrorists once again, and they would be emboldened, as they were after we pulled out of Somalia. That sign of weakness would be a sign for terrorists to get mobilized and get working on it.

Success in Iraq is essential. Sure, people are motivated on both sides by the war, but the only answer to that is to win, make sure that we prevail and protect freedom, democracy, and integrity throughout the world.

I yield the floor.

The PRESIDING OFFICER. The Senator from New Mexico is recognized.

Mr. DOMENICI. Mr. President, I ask unanimous consent for 30 minutes, to be equally divided into 10-minute parcels, to the Senator from New Mexico, the junior Senator from New Mexico, and the Senator from Tennessee, Senator ALEXANDER, and that we speak in that order for 10 minutes each.

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

NATIONAL COMPETITIVENESS INVESTMENT ACT

Mr. DOMENICI. Mr. President, while we in the Senate have been busy doing many things and our minds have been all over the world, literally, with the war in Iraq and all kinds of things that have come before us and to us for consideration, we have been confronted with a very exciting opportunity for America and America's future.

We have been listening to and acting on a rather remarkable effort involving three Senate committees, with valuable contributions from a number of other committees and a number of Senators from many committees. All of these Senators and all of these committees have worked to write this legislation and are deeply concerned about maintaining our Nation's ability to compete in the high-tech global marketplace.

Today I join a bipartisan group of Senators in speaking about legislation that will be introduced later tonight by the distinguished majority leader and the minority leader. They will introduce the legislation later this evening. Its name will be the National Competitiveness Investment Act, and its number is S. 3936.

All of us worked on this legislation because we are deeply concerned about America maintaining its ability to compete in the high-tech global marketplace.

One year ago, the National Academy of Sciences released a report that highlighted the urgency of the challenge. It was called ''Rising Above the Gathering Storm'' report, which was written by a distinguished committee chaired by Norm Augustine, former chairman of Lockheed Martin. His committee included three Nobel laureates, presidents of leading universities, and chief executive officers of multinational corporations.

The charge to Mr. Augustine and his committee was to develop a specific list of policy recommendations to bolster U.S. competitiveness. After an intensive 10 weeks of effort, the committee produced and recommended an impressive report with a list of 20 recommendations.

The recommendations all address a central problem; that is, we are not doing enough to harness and develop our national brainpower. The report recommends significant increases in

our investments in science and mathematics education at all levels—kindergarten through high school, college and graduate school.

The bill that will be introduced later tonight, as I have indicated, contains provisions to address nearly every one of the recommendations of the Augustine report. Many of these provisions were included in the Protecting America's Competitiveness Edge, or PACE, legislation, which I introduced in January along with Senators BINGAMAN, ALEXANDER, MIKULSKI, and an additional 61 cosponsors.

Through this new legislation, we are going to put the Augustine report's recommendations into action. We will authorize a doubling of research dollars to each research agency, including the Department of Energy, Office of Science, National Science Foundation, and the National Institute of Standards and Technology.

As chairman of the Energy and Water Appropriations Committee, I was pleased I was able to slightly exceed the President's request for a 14-percent increase in the Office of Science in fiscal year 2007, putting it on a track to double in a decade, which is the goal and objective of the Norm Augustine report. The NCIA, which it will be called, also includes provisions that will build on the educational program sponsored by the Department of Energy, by engaging the facilities and scientific workforce of the national laboratories, and these educational programs will help ensure that we are preparing today's young people for the demands of tomorrow's high-tech workplace. The NCIA is a good partner to the President's initiative. I applaud the President for his bold vision which he expressed to us in his State of the Union Address, and which we have built upon in the legislation we are talking about today.

I applaud the President for his bold vision and leadership in the issue of U.S. competitiveness, which is so serious and about which many of us worry, because we know that without our remaining competitive, America has no chance in a world which is built on competitiveness. We need to take action to support our standard of living and to ensure that we continue to grow and prosper. If we do not, we can expect other nations to rival our global competitiveness and one day to surpass us without a doubt.

I ask unanimous consent to have printed in the RECORD a chart I have prepared which examines and compares side by side the National Competitiveness Investment Act to the Augustine National Academies report and the administration's American Competitive Initiative to show how this bill compares with each of those.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

BIPARTISAN SENATE, NATIONAL COMPETITIVENESS INVESTMENT ACT, COMPARISON TO THE AUGUSTINE NATIONAL ACADEMIES REPORT AND ADMINISTRATION'S AMERICAN COMPETITIVENESS INITIATIVE, SEPTEMBER 2006

Category	Rising above the gathering storm	National Competitiveness Investment Act	Administration ACI
Increase talent pool by improving K–12 science/math Education.	Recruit 10,000 science & math teachers w/4 year scholarships.	√ Robert Noyce Scholarship Program to recruit and train math/science teachers $700 million/5 years.	
	Train 250,000 teachers via summer institutes, masters programs to teach AP/IB.	√ NSF Teachers Institutes, DOE Lab Teacher Institutes, $400 million/5 years. Noyce Scholarship Teacher Masters Program (DoEd), $165 million/5 years. NSF Graduate Research Fellowship, $180 million/5 years	
	Increase # of students who take AP and IB science and math courses.	√ AP and IP Grants $58 million/2 years	"Math Now" $147 million/year–FY 2007 and 2008.
Strengthen the nation's traditional commitment to research.	Increase Federal investment in fundamental research by 10% a year for 7 years.	√ DOE/NIST/NSF NASA/NOAA, 9.8%/year over 5 years	8%/year over 10 years DOE/NIST/NSF only.
	Provide $500K/year over 5 years to each of 200 top early-career researchers.	√ $100 K/year	X
	Create Coordination Office to manage $500m research-infrastructure fund.	X	X
	Allocate 8% of the budgets of Federal research agencies to discretionary funds.	√	X
	Create within DOE an organization like DARPA	√	X
	Institute a Presidential Innovation Award program	√	X
Increase talent pool by improving higher education	Provide 25,000, 4-year competitive undergraduate scholarships.	X	
	Fund 5,000 graduate fellowships for U.S. citizens in "areas of national need".	√ PACE Fellows, $98 million/5 years Fellows + IGERT, $91 million/year	
	Provide tax credit to employers for employee S&T continuing education.	Not Applicable, Finance Committee jurisdiction	
	Continue improving visa processing for international students and scholars.	Passed as part of Senate Immigration Bill	
	Extend stay of intl. students with PhDs in science/math to remain and seek employment.	Passed as part of Senate Immigration Bill	
	Institute a new skills-based, preferential immigration option.	Passed as part of Senate Immigration Bill	
	Reform current system of "deemed exports" so foreign researchers have same access as non-cleared U.S. citizens.	Issue has been resolved through administrative procedures in consultation with Committees.	
Improve incentives and infrastructure for innovation	Enhance and reform intellectual-property protection system.	X	
	Enact a stronger R&D tax credit	Not Applicable. Finance Committee jurisdiction	
	Provide tax incentives for U.S. based-innovation	Not Applicable. Finance Committee jurisdiction	
	Ensure ubiquitous broadband Internet access	X	
Five Total Authorizations		$72.8 billion	$71.4 billion [2]
Five Year Net additional authorizations		$20.3 billion [3]	NA

[1] Unofficial CBO draft bill estimate, September 15, 2006.
[2] OMB "Comparison of PACE Administration's Budget," July 2006.
[3] Majority Staff estimate—assumes no inflation adjustment to FY 2007 authorizations.

Mr. DOMENICI. Mr. President, I think it is good to summarize by saying that S. 3936 contains all but one of the provisions that are contained in the 20 suggestions made to us by the Augustine report, which has been heralded by so many to be such a vital piece of legislation which we ought to adopt and implement so as to keep our country free and competitive in a very changing world.

Mr. President, I yield the floor to Senator BINGAMAN.

The PRESIDING OFFICER. The Senator from New Mexico is recognized.

Mr. BINGAMAN. Mr. President, I thank my colleague, Senator DOMENICI, for his comments, and I join him and Senator ALEXANDER and many other colleagues who have cosponsored this legislation and congratulate our majority leader, Senator FRIST, and our minority leader, Senator REID, for their leadership in getting this issue introduced into the Senate. I hope very much this bipartisan effort can succeed and that before the end of the 109th Congress, we can see this legislation on the President's desk for signature.

This bill is the result, as Senator DOMENICI said, of a close, cooperative effort by three of our Senate committees: the Energy and Natural Resources Committee, which Senator DOMENICI chairs and of which I am the ranking member, and Senator ALEXANDER is on that committee as well; the Commerce, Science, and Transportation Committee; and the Health, Education, Labor, and Pensions Committee. I commend the staffs of those committees

for their hard work in producing this legislation, as well as the personal staffs of all Senators involved.

As Senator DOMENICI pointed out, this is a major piece of legislation which arises out of the good work that was done by the National Academies. This report which was done there made a series of recommendations which are clearly specific which will intend to put the country on a track to reverse some of the unfortunate trends we have seen in connection with our ability to compete with other countries in the world.

Senator DOMENICI, Senator ALEXANDER, Senator MIKULSKI, and I introduced three bills in January of this year in order to put into legislative form the recommendations of the National Academies report. Each of these bills went to a different committee.

Since all three of us on the Senate floor today are members of the Energy Committee and since Senator DOMENICI chairs that committee, we were able to move more quickly in the Senate Energy and Natural Resources Committee with the legislation that was assigned to that committee, S. 2197, which authorizes a number of programs to strengthen the Department of Energy's role in promoting stronger math and science education from kindergarten through graduate school. It creates a Director for Math and Science Education in the Department of Energy. The bill strengthens the role of our national laboratories in this K–12 math and science education. It authorizes a program whereby national laboratories adopt a nearby school to increase its math and science proficiency.

The bill goes on and on with other initiatives which are taken directly from the recommendations of the Augustine commission that was referred to earlier. These provisions that are in S. 2197 have remained largely intact in the legislation that is being introduced today. In some cases, we had to reduce the authorization levels so that the increases to particular programs were ramped up over a period of time instead of suddenly doubling existing programs as had been recommended.

In the education area, the National Academies report assigned highest priorities to this need to strengthen K–12 math and science education, and this legislation does so in a variety of ways. Senator DOMENICI elaborated on some of those. I will not go into great detail about them, but they are directly taken from the National Academies report.

We are all aware here in the Senate that we operate on two different tracks: we operate on the track of authorizing legislation and the track of appropriating legislation. The legislation we are talking about today and introducing today is authorizing legislation, so it is only one of the steps needed in order to get action accomplished here in the Congress. But it is an important step, and it is particularly important when you are setting a long-term goal.

That is what this legislation attempts to do: It tries to look long term. It tries to say that we need to ramp up our investment in these critical areas of concern so that 5 years from now, 10 years from now, we will see a change in these trend lines which have so concerned the National Academy of Sciences as well as many of us here in the Congress.

This bill authorizes $73 billion to be spent over 5 years to maintain our Nation's competitive edge. Of that, about $20 billion is considered new funding; that is, it is funding above the 2006 level at which we are today. These are only authorizations. It is not an appropriation. It is going to be our job, and it is not an easy job, but it is going to be the job of the Congress not only to appropriate these new moneys we are here authorizing but also to make sure those moneys are not appropriated at the expense of other important programs in the Department of Education or in the National Science Foundation or in the Department of Energy. I think we are all aware that this has to be new money in a genuine sense of that term.

Again, I thank my colleagues for joining in this bipartisan effort. I believe this is a very good piece of legislation. It is an important piece of legislation. Often we allow the urgent to crowd out adequate consideration for the important items that ought to be on our agenda. This is an exception to that. This is a case where we are giving attention to the important issues.

Let me particularly single out for praise Senator ALEXANDER. He has, at every step in this process, been pushing to get this initiative one step closer to the goal line. I compliment him for doing that. I compliment him for the introduction of this legislation today, and I compliment all my other colleagues who have been so cooperative in seeing that happen as well.

Mr. President, I yield the floor.

The PRESIDING OFFICER. The Senator from Tennessee is recognized.

Mr. ALEXANDER. Mr. President, I thank the Senator from New Mexico and the senior Senator from New Mexico for their leadership and their comments. This is important legislation.

It is worth pausing today to notice that this is legislation which will be introduced tonight by the majority leader of the Senate, Senator FRIST, and by the Democratic leader of the Senate, Senator REID. There are not very many things this year in this Congress that have been introduced by our distinguished two leaders. They do that for a reason. They usually don't even cosponsor legislation. But they have decided that in this case, this issue is so important that they wanted to send a signal to our country, to the rest of us in the Senate, to the Members of the House of Representatives, to all of us.

The Presiding Officer and I deeply believe it is urgently important for our country to do what it takes to keep our edge in science and technology so we can keep our share of good-paying jobs in the United States of America and not see them go overseas to China and India and other places. This is the way to do that, and this is an important beginning. It would not have happened but for Senator DOMENICI and Senator BINGAMAN and a variety of other Senators—so many, it is hard to mention them all. In fact, the reason I think the bill is having such success as it moves through the Senate is that it has so many fathers and mothers, it is not possible to tell who they are because this is a subject matter which many Senators have been working on for a long time.

This bill is about growing our economy, creating as many good new jobs as we can, so that in 20 years we don't wake up and wonder how countries such as China and India passed us by. This is a pro-growth investment. This $20 billion of new spending over 5 years is as much a pro-growth investment as a tax cut is.

In my experience as a Governor of a State, we had low taxes, and that helped to create new jobs. But we also needed to make investments in centers of excellence and good teaching and distinguished scientists because we knew what most of the world now is learning: most of our good new jobs come from brainpower, from our advantage in science and technology. We are in a constant state of losing jobs every day as most healthy economies are. So the key to our success is how many good new jobs we can create, and the key to that is our brainpower advantage.

We are not the only ones in the world who understand this. We have a Democratic leader who understands it. We have a Republican leader who understands it. We have a President of the United States, President Bush, who understands it and who made it a central part of his State of the Union Address. But let me mention just one other President who understands it.

Just about a month ago, a group of Senators, led by Senator STEVENS and Senator INOUYE, traveled to China. We met with the President of China, President Hu Jintao. We also met with the Chairman of the National People's Congress, the No. 2 person in China, Mr. WU. Just 2 months earlier, in July, President Hu went to the Chinese Academy of Sciences and the Chinese Academy of Engineering to outline a new 15-year plan to make China the technology leader in the world. In his speech, the President of China said China must:

> Promote a huge leap forward of science and technology; we shall put strengthening independent innovation capability at the core of economic structure adjustment.

His plan included reforming China's universities and massively investing in new research.

The President of China concluded his speech this way:

> We all bear the time-honored mission to provide strong scientific support for the construction of a well-off society by improving

our independent innovation capability and building an innovative country. I hope that our scientists and technicians will strive hard to make brilliant achievements and constantly contribute to our country and the people.

Mr. President, I ask unanimous consent that the complete remarks of President Hu to the Chinese Academies of Science and Engineering in July be printed in the RECORD at the conclusion of my remarks.

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

(See Exhibit 1.)

Mr. ALEXANDER. We met with President Hu for about an hour, those of us from the Senate. We talked about a variety of issues with him: North Korea, Iran, Iraq. He was more animated about this subject than any other subject, which is why I suppose we had 70 Senators—35 Democrats, 35 Republicans—who cosponsored the Domenici-Bingaman bill that was the Augustine report. We all understand it is very important.

We have seen what is happening in India. India is another great country with a distinguished group of scientists, and they now recognize if they want a bigger share of the world's economic pie, the way to do that is through science and innovation.

The challenge America faces today is really a challenge about brain power and jobs. I appreciate the way the Augustine report especially put this into perspective. It didn't say the United States of America is about to fall off a cliff or that China and India are going to catch us tomorrow. It said we face a gathering storm.

We need to realize how fortunate we are in the United States of America when it comes to our standard of living. We constitute between 4 percent and 5 percent of the world's population. Last year we had 28 percent of the world's wealth. The International Monetary Fund says the gross domestic product of the United States last year was 28 percent of the global total for just 4 to 5 percent of the people.

The average Chinese person probably has a share of the gross domestic product that is one-twentieth of the average American. By some estimates, China may be moving fast enough to have a gross domestic product as big as that of the United States by the year 2040. But even then, the average American's share of that amount of wealth will be four to five times as much as that of the average Chinese person. So we are not about to fall off the cliff.

But at the same time, we know if we want to keep our high standard of living for all Americans, we have to constantly create a large number of good new jobs. And the way we do that is brain power. Our good fortune comes from that advantage in brain power. We have the finest system of colleges and universities. We attract 500,000 of the brightest foreign students. They come here because these are the best institutions. Many stay here, creating good new jobs for us. Many go home. Many are going back to China and India to help their countries succeed. No country has national research laboratories to match ours. Americans have won the most Nobel Prizes in science. We have registered the most patents. That innovation has been responsible for at least half of our good new jobs.

That is why we introduced this bill today. That is why we went, together, the Democratic side, the Republican side, to the National Academy of Sciences and said: We see this coming. Tell us what we should do. Tell us specifically what we should do, 1 through 10 in priority order. If you tell us, if you are specific about it, I bet we will do it.

Some who watch Congress might think that is a little bit naive because we disagree about a lot and there are a lot of politics here. But the National Academies came back with 20 recommendations. The Council on Competitiveness already had a very good report. The President made his own proposal, which was very substantial. Lo and behold, we have worked together for 18 months and came up with an even better piece of legislation than any of us introduced to begin with. And we have virtually a unanimous agreement about it, among three of the largest and most important committees here, and the majority leader and the Democratic leader are sponsoring the bill themselves.

We should pass this legislation this year. We should not go home without doing it. We can't do it this week. But by introducing the legislation today, Senator FRIST and Senator REID give our country a chance, while we all are at home in the next 4 weeks, to tell us what they think about it.

There are a lot of people running for the Senate. I hope in every single Senate race this year someone asks the question, Are you in favor of the Frist-Reid competitiveness legislation, and do you believe it ought to pass the Senate before the end of the year? I hope that question is asked. I believe the answer will be yes.

Our friends in the House of Representatives have been working hard on this issue, too. Again, it is not just a Republican initiative, not just a Democratic initiative, they have plenty of bipartisan effort there, too. It would be my hope that we can take what they have done and what we have done and do it before the end of the year. This is just the beginning of what we are able to do.

Senator DOMENICI and Senator BINGAMAN did a good job of suggesting what the bill includes, so I will not belabor that. But I would simply like to conclude my remarks to try to bring these lofty words down to Earth a little bit in terms of how this legislation might actually affect one State.

For example, if this legislation is enacted, many bright Tennesseans could receive 4-year scholarships to earn bachelor's degrees in science, technology, engineering, or math while concurrently earning teacher certification. The new teachers would be expected to teach in poorer schools for at least the first few years after graduation. That would be available in every State.

There could be summer academies for math and science teachers in Tennessee. In our case, it could be at the Oak Ridge National Laboratory, providing opportunities for those teachers to work with distinguished scientists and go back to the classrooms and inspire their students.

There would be more advanced placement training for 400 Tennessee math and science teachers so more students could learn math and science, we could have more home-grown scientists. There would be support for a proposed math and science specialty high school. Our Governor has recommended that. North Carolina has had one for 20 years. We never felt we could afford it in Tennessee, but this would give some help to our State in terms of having a specialty high school in math and science.

There would be high-tech internships for middle and high school students across our State, and there would be growing support Tennessee-based researchers that would lead to new high-tech jobs. This is in addition to the increases in funding for the physical sciences authorized in this legislation, which would especially affect our research universities and our National Laboratories.

So I am delighted to have had the opportunity to be a part of this. I look forward to advancing it. I certainly intend, as I go across Tennessee, to let our citizens know what the Frist-Reid competitiveness legislation offers our country. I intend to let them know that this is the way we keep our high standard of living and that we should be expected to act on it before the end of the year.

I congratulate all those Senators who have worked on it, and I invite every single Member of this body to be a cosponsor.

EXHIBIT 1

ADDRESS BY HU JINTAO AT 13TH ACADEMICIAN CONFERENCE OF THE CHINESE ACADEMY OF SCIENCES (CAS) AND 8TH ACADEMICIAN CONFERENCE OF THE CHINESE ACADEMY OF ENGINEERING (CAE), BEIJING, JUNE 5, 2006

Dear academicians and comrades, Today witnesses the opening of 13th CAS academician conference and 8th CAE academician conference. First of all, on behalf of the CPC Central Committee and the State Council, I would like to extend my warm congratulations to the conferences, and my sincere greetings to the academicians of CAS and CAE and all scientists and technicians in China!

The conferences of CAS and CAE are held in this crucial moment of turning on the 11th Five-Year Plan. The success of the conferences will have great significance in giving play to the leading role of academicians of CAS and CAE in China's scientific and technological development, and encouraging scientists and technicians to build China

into an innovative, well-off society in an all-around way.

Today I would like to talk about three issues.

I. CURRENT SITUATION AND SCIENCE AND TECHNOLOGY TASKS OF CHINA

China has maintained a sound momentum of economic growth in the 28 years since reform and opening up. The process of industrialization, urbanization, marketization and globalization has been accelerated, social productivity, technological strength and overall national strength have been significantly enhanced, and people's living standard has been improved. Socialist political and spiritual civilization construction has been fully strengthened, China's standing has been elevated and its international influence has expanded. We have successfully completed the 10th Five-Year Plan, and are striving for goals of the 11th Five-Year Plan on a new starting point. At the beginning of this year, the State Council issued China National Mid- and Long-Term Science and Technology Development Plan. Meanwhile, CPC Central Committee and the State Council decided to implement the Plan and enhance independent innovation capability, while holding a National Conference for Science and Technology, calling for building our country into an innovative country within 15 years. The scientists and technicians around the country are striving vigorously for the strategic task.

The more achievements we have made and the more promising outlook we are facing, the calmer shall we remain. While affirming the achievements, we shall analyze correctly the opportunities and challenges we are facing.

Seen from an international perspective, peace, development and cooperation is the irresistible trend of the times, world multipolarization and economic globalization are progressing, science and technology are advancing rapidly, international industry and technology transfer is accelerating, and there is a growing tendency of foreign countries to cooperate with China. Meanwhile, international situation is experiencing profound and complicated changes, instabilities and uncertainties that affect peace and development are increasing, international competition is being intensified, and our country is still pressed by economic and technological advantages of developed countries.

As for domestic development, our economic strength has been notably strengthened, and socialist market economic system is improving. Abundant labor resources, huge market and stable social politics lay solid foundation for the economic development of our country and promise us a bright future. However, China, the large developing country with over 1.3 billion people, is now in the primary stage of socialism and will remain so for a long time to come. For the time being, we are challenged by such acute problems: low productivity, unbalanced development, low living standard, weak agricultural foundation, extensive economic growth mode, growing limitation by energy resources, worsening environmental pollution and ecology contamination. We shall make long-term efforts to tackle such problems and achieve the goal of modernization.

Now turn our eyes to the world's scientific and technological development. Science and technology, especially strategic hi-tech has become an increasingly decisive factor of economic and social development, as well as the focus of overall national strength competition. Science and technology are advancing rapidly, creating many new cross-subject fields through overlapping and penetration between subjects, between science and technology, and between science and humanities. Scientific discoveries are providing more favorable conditions for technical innovation and productivity development, leading to shortened S&T result industrialization cycle, faster technological updating, and rapid development of hi-tech and industries represented by information technology and biotechnology. New scientific breakthroughs and economic growth points have been created to mark scientific innovation and advanced productivity, while driving economic and social development. A nation's core competition increasingly reflected in cultivation, configuration and controlling capability of intelligence resource and scientific results, as well as ownership and utilization of intellectual property. In the surging waves of world scientific development, it is clear that whoever masters the new features and trends, grasps opportunities and constantly improves scientific strength especially independent innovation capability will hold priority in overall national strength competition. Now, major countries are accelerating their steps of scientific R&D. Rapid scientific progress and its impelling influence have posed inevitable challenges before us. The only way out for us is to catch up with the developed countries with persistent spirit and independent innovation capability, enhancing our core competitiveness and boosting our productivity in order to win in the fierce international competition.

Through long-term efforts, we have made brilliant achievements in science and technology, formed a complete subject layout, and fostered a team of scientific scholars who are in scientific innovation. Our R&D ability in some crucial fields has ranked top in the world. However, compared with the world's advanced level, we still have a long way to go. There are problems that hamper economic and social development, including weak independent innovation capability, few invention patents, high dependence on key technologies abroad, low proportion of hi-tech industry, enterprises not truly becoming the mainbody of technological innovation, scientific results not industrialized yet, and lack of excellent talents etc. We have to make great efforts to tackle them.

In a word, seen from any angle, we are facing both opportunities and challenges. Under the circumstance of intensified international competition and complicated tasks on domestic reform, development and stability, we must be prepared for any eventualities, facing, meeting and defeating challenges while recognizing, seizing and taking opportunities. Furthermore, we should put more attention to varied challenges that may affect current or long-term development of our country, focus on vital contradictions and problems, and promote the better, swifter economic and social development based on technological development.

To build an innovative country is a strategic decision made by CPC Central Committee and the State Council based on the consideration of building a well-off society in an all-round way and creating a new situation in building socialism with Chinese characteristics. To realize this objective, we shall raise strengthening independent innovation capability to a strategic position, create a new way for independent innovation with Chinese characteristics, and promote a huge leap forward of science and technology; we shall put strengthening independent innovation capability at the core of economic structure adjustment and economic growth mode transformation, build a resource-efficient, environment-friendly society, and push forward swifter and better development of national economy; we shall take strengthening independent innovation capability to be our national strategy and implement the strategy throughout modernization construction; we shall inspire the nation's innovative spirit, cultivate high-level innovative talents, form a system or mechanism favorable for independent innovation, promote innovations in theory, system and technology, and continuously consolidate and develop socialism with Chinese characteristics. With strong sense of historical responsibility and worldwide vision, and under the guideline of ''independent innovation, key breakthrough, sustainable development and leading the future'', we shall persistently take science and technology as primary productive force, implement strategies of Invigorating China through Science and Education and Reinvigorating China through Human Resource Development, stick to the principle of ''rely economic construction & social development on science & technology, and science & technology progress serves economic construction & social development''; develop major policies and relevant measures for scientific development, push forward national innovation system construction, strengthen studies on basic science, hi-tech field and sustainable development, quicken the transformation of knowledge and technology to actual productivity in order to provide strong technological support to economic and social development, and make science and technology modernization the true drive forces for rejuvenation of the Chinese nation.

II. BUILD A LARGE-SCALED TEAM OF INNOVATIVE TECHNICAL TALENTS

Talents, especially innovative technical talents, play a key role in building an innovative country. It is impossible to realize this goal without the support of a powerful team of innovative technical talents. The worldwide competition of overall national strength is actually a competition for talents especially for innovative talents. Only those who cultivate, attract, and make good use of the talents especially innovative talents can hold priority in the fierce international competition, and realize the development goals as well. Here, I would like to talk about how to intensify the cultivation of innovative talents.

The whole technical innovation history has proved that innovative technical talents are creators of new knowledge, inventors of new subjects, leaders of technical breakthroughs and development approaches, and strategic treasures for a nation's development. Cultivation of innovative technical talents with no hesitation is essential for improving independent innovation capability and building an innovative nation, and is also indispensable for realizing the state's development goals and rejuvenation of the Chinese nation. We should persist in the strategy that considers talents to be primary resources, take cultivation of innovative technical talents as a strategic measure to build an innovative nation, and quicken our steps of building a large-scaled team of innovative technical talents.

To cultivate innovative technical talents, we should thoroughly carry out the strategy of paying respect to labor, knowledge, talent and creation, follow the requirements of building an innovative nation and the rules of talent development. We should attract the talents with business, shape the talents with practices, spirit up the talents with our system and protect the talents with our laws so as to enlarge the team of the technical talents.

The cultivation of innovative technical talents is complex program that requires joint efforts from all party committees, governments, relevant departments, universities, scientific institutions and the whole society. We should highlight the following aspects in our work:

First, improve the cultivation system. The cultivation of innovative technical talents is a long comprehensive process, and we must begin from education. We should further enhance education reform and the education for all-round development according to China's economic and social development especially technological development, in order to establish an education system favoring for innovative technical talents. We should take systematic control of primary schools, middle schools, universities and employment in order to establish an effective mechanism to cultivate innovative technical talents. In addition, we should change the traditional indoctrinatory way of education into a new innovative manner, paying more attention to students' initiative and creative thinking mode while respecting the guiding role of teachers. We should reduce the homework burden of primary and middle school students, inspire their curiosity and exploration enthusiasm so that they will make all-round development based on their interest and potential. We should reform the course arrangement of colleges and universities, update teaching materials, and pay more attention to the combination of theory and practice, in order to cultivate the students' innovation spirit and capability. We should lay great emphasis on the cultivation of technical development and practice capability, and improve the ability to turn scientific achievements into project application. Moreover, we should provide continuing education for on-the-job technicians at different layers through multiple channels, and accelerate the establishment of an open, independent networking life-long education system, so that the technicians will learn new knowledge and skills continuously to improve their capabilities of technological innovation.

Second, use talents without prejudice. We should establish and complete a targeted management system and method to distinguish and cultivate talents on an equal competition basis. Instead of paying sole attention to one's educational background, qualification or status, we should provide more opportunities for excellent talents, especially young innovative technical talents. We should carry out the state's and industry's plan for technical talent cultivation, actively push the building of the innovation team, and create a good environment for cultivation and development of innovative technical talents under the support of the state's talent cultivation programs, important researches and projects, major industry projects, key subjects and research bases and international academic exchange projects. We should carry forward the innovation culture, build harmonic interrelationship, keep a free working environment, create a solidaric organization system, understand the personalities of the innovative talents, allow them to express their new academic thoughts and ideas, encourage and cultivate their innovation spirit, inspire their enthusiasm in innovation, and ensure that they make innovations dedicatedly. The technological innovation is risky and unpredictable, which requires tolerance of failure during innovation. Therefore, we should take good care of the talents facing frustrations, and support their future work based on past experiences. In addition, the leaders and managers of the technical team should improve their leading and management capability, make every effort to be the talent scout, and make good use of the talents.

Third, improve the system and policy support. We should continue deepening the science & technology system reform to give full play to the leading role of the government and the fundamental role of market in the distribution of technological resources. A comprehensive system pertaining to talent training, utilization, appraisal, assignment and flow should be established. By changing attitudes, practices and systems that block the growth and accomplishment of talent, we should guarantee the successful implementation of systems and policies that encourage technological innovation in scientific research institutions. Considering one's moral character, performance, knowledge and capability, a comprehensive appraisal system should be established to realize management by objectives (MBO) for the innovative talent's contributions and further curb the usual practice of ignoring capability and performance while focusing on educational background and seniority during appraisal. Improve the mechanism of encouraging enterprises to increase scientific investment in order to give play to their leading role in technological innovation and diversify the pattern of scientific investment. Establish an enterprise-centered, market-oriented scientific innovation system that combines production, education and research; encourage innovative talents to gather in enterprises. Improve the intellectual property system to inspire people's zest for innovation, safeguard their rights and interests, and provide legal protection for technological innovation and utilization of innovative achievements. The title evaluation should be restructured to encourage all kinds of talents to engage in knowledge-based and technological innovation. More attention should be put on key industries and human resource-intensive organizations, technology extension in remote and poor areas, industrial and agricultural production bases, various enterprises and institutions that have brought significant social and economical benefits, as well as young and middle-aged technicians. Income distribution and incentive systems that encourage innovation should be established; priority shall be given to key positions and distinguished talents, and talents with remarkable contributions will get rewards. In this way, we can form a mechanism in which posts are obtained by competition, salaries depend on contributions, and eminent talents have enviable income. The talent flow system and talent information management system should be improved to wipe out institutional obstacles in talent flow, promote the orderly and rational flow of talents, let rare talents and professionals demonstrate their full capabilities, and ensure the reserve of talents for the state's major scientific and technological projects.

Fourth, adopt open cultivation. No innovative technical talent, especially the pioneers, can be cultivated without going deep into the reality. Under the critical situation that international scientific and technological level surpasses ours, it's hard to cultivate a group of innovative talents in a short time without adopting an open manner. Improving independent innovation capability based on introduction and assimilation is an effective way to catch up with international advanced level, while open cultivation is the right method of bringing up internationally recognized, top-notch talents and pioneers in science and technology. Having studied abroad and communicated with the foreign companions, most academicians in CAS and CAE and outstanding technical workers have demonstrated their talents in international exchange and cooperation, while learning advanced innovation concept and latest technologies. By sticking to the opening-up policy and communicating with international scientific institutions in various forms, we can benefit from global technological resources and learn from all civilizations that human beings have created. Scientific institutions and universities are encouraged to cooperate with overseas R&D institutions to build joint laboratories or R&D centers. International programs shall be promoted under the protocol of bilateral and multilateral scientific cooperation. National enterprises are encouraged to establish R&D institutions or industrial bases in foreign countries and multinationals are also encouraged to set up R&D institutions in China. We should actively participate in large international scientific projects and academic organizations. Chinese scientists and scientific institutions are encouraged to join or organize large international or regional scientific projects. Utilize human resources from both home and abroad by combining domestic talent cultivation with introducing overseas talents. While developing human resources at home and training talent independently, we should step up efforts to introduce foreign talents as well as new and high technologies. Various measures can be taken to attract talents studying abroad to come back and start their own business; highly-qualified overseas talents or talents urgently needed for our social and economic development are warmly welcomed.

Fifth, create a social environment that fosters technological innovation. Innovation culture and technological innovation promote and encourage the development of each other. The Chinese culture has long been advocating innovation and our ancestors emphasized, ''A gentlemen shall strive along with perseverance''. We shall encourage the spirit of innovation so as to provide a powerful cultural support to building an innovative talent team and an innovative nation. Innovation awareness should be raised in the whole society. We encourage people to think innovatively, act initiatively and take risks in the hope of creating a favorable social environment that supports talents to start business and succeed. Scientific knowledge, methods, ideas and spirit should be widely spread to equip more common people with scientific knowledge, which in turn will lead a trend of doing things scientifically, loving science, studying science and applying scientific findings. Publicize exemplary stories and figures in technological innovation to make people realize the role of innovation in driving economic and social development. The value that ''innovation is glorious'' should be emphasized, enabling technological innovation to be a kind of work and activity respected by the whole society. Science popularization should be strengthened to foster a notion of technological innovation in teenagers' minds and inspire them to become the main force in technological innovation and scientific development in the future.

It is proved that innovative technical talents, especially the pioneers, are all endowed with basic qualities and characteristics necessary for their development and technological innovation. In sum, there are six qualities to become an innovative scientific talent in China today. First, you must have high ideals for life, love the country, the people, and science and technology, be qualified in both ability and moral integrity, and realize your values of life in making scientific contributions. Second, you shall have enough aspiration and courage to seek truth, emancipate your mind, draw conclusions from facts, keep pace with the times, keep strong desire for innovation and exploration, have sharp eyes on new things and knowledge, dare to challenge authority and traditional concepts, and run forward without fear to seek truth and innovation. Third, you must be competent in precise and scientific thinking, master the thinking method of dialectic materialism, and keep lifelong studying by using scientific methods to constantly update your knowledge and theories, build a wide, profound knowledge structure, and foster comprehensive scientific and cultural

quality. Fourth, you must have solid professional knowledge, international vision and keen insight to grasp the trend of scientific development and innovation, and be adept at providing key solutions for major scientific problems. Fifth, you must have strong team spirit to lead the innovative team in implementing major scientific programs or tackling front-line science difficulties by organizing multi-subject experts and collecting knowledge on all fronts. Sixth, you must be honest and serious about your work, indifferent to fame and wealth, have strong ambition and high ideals, hardbitten and determined, unafraid of hardships and frustration. You must have the courage to defeat difficulties in technological innovation in order to make great achievements continuously. These qualities can be found in successful scientists of any country, as well as our academicians, excellent scientists and technicians. We shall inherit and carry forward the fine traditions and styles of Chinese scientists and technicians, which will play a very important role in cultivating a large group of innovative scientific talents.

There is a Chinese saying, ''It is easy to recruit thousands of soldiers, but it is not so easy to find a general.'' A leading scientific elite, an international scientific master or pioneer can lead a team of excellent innovative scientific talents to make world-leading scientific achievements, giving birth to competitive enterprises and new industries. There are many such leaders among our academicians, but there's shortage of such talents in our whole country. So our work of cultivating innovative talents shall focus on such talents esp. youth or middle-aged leaders. Meanwhile, we shall cultivate innovative talents at different levels, who will act as backbone of academic and technical innovation and form a talent structure suitable for scientific innovation, thus promoting innovation practices in each field and at different layers.

The scientific and technological development in China is now facing many opportunities for huge leap forward. Under the background of reform, opening up and modernization construction, it is urgent to develop science and technology, and the scientists and technicians are able to exhibit their brilliancy. The aspirant scientists or technicians shall seize the opportunity to contribute to the construction of an innovative country while realizing their own dream in this course.

III. ACADEMICIANS OF CAS AND CAE DISPLAY THEIR TALENTS IN BUILDING AN INNOVATIVE COUNTRY

Academicians of CAS and CAE represent our country's highest academic level in science and engineering technology. They enjoy highest honor and are respected by the whole society. As leaders of national science and technology, academicians of CAS and CAE has long been committed to our country's scientific and technological development as well as economic and social development. Thanks to their painstaking efforts, we have made all these achievements from drawing of The 1956–1967 Science and Technology Development Plan to successful development of ''two bombs and one satellite'' in hard times, from drawing and implementation of ''863 Program'' and ''973 Program'' that play a key role in our scientific development to the launch of manned spaceship of Shenzhou V and Shenzhou VI, from a series of discoveries including hybrid rice, nonmarine oilgeneration theory and application and high performance computer to the great projects of Three Gorges, south-to-north water diversion, west-to-east electricity and gas transmission, Qinghai-Tibet Railway, and high speed railway transportation. Mr. Wang Xuan who passed away recently is just one of the most outstanding academicians. He devoted all his life to science, and becomes the model of all scholars with the spirit of pioneering, earnest aid to young generation, and utter devotion. Academicians of CAS and CAE are truly the pride of our nation and people!

It has been proved that the academician system with Chinese characteristics fits the real situation of our country. It is very effective in gathering scientific elites to contribute their ideas and tackle difficulties in economic and social development, organizing innovative team for national major scientific projects, and stimulating the scientists and technicians to work for our country's flourishing and prosperity. But after all, academician system has existed in China for only decades. To give better play to its functions, we shall continue improving the system based on real situation and experiences.

The Central Committee of CCP, State Council and Chinese people have high expectations towards academicians of CAS and CAE. We hope that, with the advantages of cross-subject, cross-department and high academic level, CAS and CAE will carry out macroscopic, strategic, proactive and comprehensive decision consultancy on such major issues as promoting economic and social development, improving people's living standard and ensuring national defense. Meanwhile, they shall organize scientific research team to play a leading role in professional fields, provide the Party and government with valuable opinions, and make major decisions more scientific and democratic through real efforts.

We hope that academicians of CAS and CAE will endeavor to become pioneers standing at the frontier of scientific innovation with the patriotic spirit of love for our homeland and conscientious devotion, scientific spirit of being practical and innovative, exploration spirit of being unafraid of hardships, and team spirit of being cooperative and indifferent to fame and wealth. They shall bear in mind the major scientific problems in economic and social development, combine national demand and microdeployment with free exploration, continue to drive original innovation and R&D of core technology and integrated technology, promote introduction, assimilation and re-innovation, industry-academy-research integration, and work hard for huge leaps of independent innovation capability as well as construction of an innovative country.

We also hope that academicians of CAS and CAE can take lead in all-out efforts of building an innovative country; carry forward the scientific spirit of seeking truth from facts, foster socialist concept of honor and disgrace—Eight Honors and Eight Disgraces; bear the responsibility of demonstrating innovative behavior and achievements to the public and promoting innovative culture; develop the people's interests in science and technology, deepen their knowledge about scientific innovation, and build innovative culture together. Meanwhile, I sincerely hope you will shoulder the heavy task of cultivating talents especially innovative scientific talents, develop academic echelon, and make every effort to support the innovation and rapid growth of youths.

Dear academicians and comrades!

We all bear the time-honored mission to provide strong scientific support for the construction of a well-off society by improving our independent innovation capability and building an innovative country. I hope that our scientists and technicians will strive hard to make brilliant achievements and constantly contribute to our country and the people.

The PRESIDING OFFICER. The Senator from Nevada.

Mr. ENSIGN. I ask unanimous consent to speak in morning business.

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

Mr. ENSIGN. Mr. President, I join Senators ALEXANDER, BINGAMAN, and others in talking about a topic that I personally have spent a great deal of time on over the past two years: how to improve the ability of the United States to compete in an increasingly global marketplace.

We have held many hearings in the Commerce Committee and in the Commerce Subcommittee that I chair on technology, innovation, and competitiveness issues. I know that both the HELP Committee and the Energy Committee have also examined related issues of competitiveness and innovation within the scope of their jurisdiction. A major focus of these hearings has been to consider how we keep America on the cutting edge.

We have learned some startling statistics. First of all, we find out that America will graduate somewhere around 60,000 to 70,000 engineers this year. China and India together will graduate a much larger number of engineers in that same time period.

In the 21st century, we need to encourage more people to go into the technology fields, into science, math, and engineering. We need more students to pursue advanced degrees in these fields. We need to inspire more of our young people to go into these fields.

One interesting fact that came out is that if our kids become disinterested in science and math in elementary school, the chances of them ever becoming interested in these fields later on in life are virtually nil. So we have to focus on inspiring our young kids to go into science, technology, engineering, and math from a very young age.

We had a fascinating hearing with the Director of the Museum of Science in Boston—Dr. Ioannis Miaoulis—who put it very simply. He said: When we started our curriculum in the United States for elementary school, we started it back in the late 1800s. Engineering was not a big field back then, so it didn't get a lot of attention then and that has carried over into our current curriculum. Now when we teach about science, we learn a lot about nature. Those are good things to learn. As a matter of fact, I have kids in school now, and one of the things we all learn about is how a volcano functions. Dr. Miaoulis talked about this when he testified before my Subcommittee. We all build our model volcanos with our kids and see how a volcano works.

Dr. Miaoulis posed this question. He said: Have you ever noticed how everybody in America learns how a volcano functions, but nobody really learns how a car functions?

Then he asked this question: Where do you spend more time, in a car or in a volcano?

As the story suggests, our children are not learning enough about engineering concepts in our schools, and as a result they are not becoming interested in those engineering concepts. The National Competitiveness Investment Act that I am happy to join with my colleagues in introducing today focuses on three primary areas of importance to maintaining and improving the innovation of the United States in the 21st century: research investment, increasing science and technology talent, and developing an innovation infrastructure.

A tremendous amount of bipartisan cooperation has gone into the development of the National Competitiveness Investment Act, going back well over a year to when Senator LIEBERMAN and I first started drafting legislation to address key concerns, identified in ''Innovate America,'' a report from the Council on Competitiveness.

Subsequent reports such as the National Academies' ''Rising Above the Gathering Storm,'' have raised similar concerns and have led several Senate committees to look at programs related to basic research, education, and other areas of competitiveness within their respective areas of jurisdiction.

As a matter of fact, Senators ALEXANDER, BINGAMAN, and DOMENICI introduced what they called their PACE bills that addressed a lot of the problems that were identified in the National Academies, ''Rising Above the Gathering Storm'' report. During the past several weeks we have undertaken a bipartisan effort to combine the work products of the Senate Commerce Committee, the Senate Energy Committee, and the Senate HELP Committee. This effort has included the involvement of the chairmen and ranking members, both Republicans and Democrats, from all of these committees, as well as several other Members who have been involved. This has been under the direction of the two leaders' offices. This is the most bipartisan effort on any bill probably in the last several years in the Senate.

This was no easy task, especially when we need to be ever vigilant about growing deficits. We were forced to take a hard look at how to best address pressing needs related to science, technology, engineering, and math education, basic research and barriers that U.S. companies are facing as they compete in this global economy.

I believe the legislation before us today is a good compromise, and it reflects a good mix of spending on key priorities like basic research and education, while being sensitive to avoiding the duplication among various federal agencies. This legislation will ensure these programs are being evaluated and are being responsive to key needs, while at the same time being fiscally responsible.

Specifically, the National Competitiveness Investment Act would increase authorization for the National Science Foundation, or the NSF, from approximately $6 billion in fiscal year 2007 to more than $11 billion in 2011.

We doubled the funding for the National Institutes of Health, the life sciences, and it is now time to do the same for basic research in the physical sciences. This is an investment in our country.

I am a fiscal conservative. I am one of the most fiscally conservative Members of the Senate. But every dollar we spend on basic research is a dollar that will come back to us in spades in terms of stimulating economic activity and helping to keep the United States at the forefront of global innovation.

By the way, those who are concerned about tax revenues coming in, the better our economy does, the more tax revenues come into the Federal Government.

The bill also expands existing NSF graduate research fellowship and traineeship programs. It requires NSF to work with institutions of higher education to develop professional science master's degree programs and strengthens the NSF's technology talent program.

It also helps to prioritize activities in NSF's research and related activities account to meet critical national needs in the physical or natural sciences—technology, engineering, mathematics; or to enhance competitiveness or innovation in the United States. And there is language to authorize the National Institutes of Standards and Technology from approximately $640 million next year to $940 million 4 years later.

It would require the same agency to set aside no less than 8 percent of its annual funding for high-risk, high-reward innovation acceleration research.

This is very important because this is different than what people do today. We need to invest in high-risk, high-reward basic research and setting that 8 percent as a minimum is very important.

This bill also requires the National Academy of Sciences to conduct a study to identify the forms of risk that create barriers to innovation 1 year after enactment and 4 years after enactment. It establishes the Innovation Acceleration Research Program to direct Federal agencies funding research in science and technology to set a goal, once again, of dedicating approximately 8 percent of the research and development budget toward high-risk frontier research.

It also authorizes increased funding for the Department of Energy's Office of Science over the next 5 years. We all know how important it is for the Department of Energy to be involved in basic research.

There are other provisions to assist States in establishing specialty schools in math and science to benefit high-need districts. The bill also strengthens the skills of thousands of math and science teachers by establishing training and educational programs at summer institutes hosted at the National Laboratories.

The bill also establishes partnerships between the National Laboratories and local, high-need high schools to create centers of excellence in math and science education.

Finally, the bill authorizes competitive grants to States to promote better alignment of elementary and secondary education with the knowledge and skills that are needed to succeed at institutions of higher education and in our marketplaces in the 21st century.

This is a comprehensive piece of legislation to address the key recommendations in the two reports, ''Innovate America'' and ''Rising Above the Gathering Storm.''

While I am sure there are many other well-intentioned ideas of other provisions to add to this bill, I would plead with my colleagues to not overload this bill. We have worked diligently together in a bipartisan fashion over the last 2 years to remain absolutely disciplined and to confine this effort to enacting the key provisions that relate to innovation and competitiveness. We have worked hard to keep the cost of this bill within a responsible budgetary framework.

I believe we have a solid work product that will help the United States be competitive as we enter an increasingly difficult global marketplace where our students and our U.S. companies need to be prepared to meet an unprecedented global challenge.

I am pleased that Senators FRIST and REID have agreed to address an issue of this tremendous importance to the United States on a bipartisan basis.

I thank my colleagues from the Commerce Committee, Senator STEVENS and Senator INOUYE; from the HELP Committee, Senator ENZI, Senator KENNEDY, and Senator ALEXANDER; and, from the Energy Committee, Senators DOMENICI and BINGAMAN and their staff for great bipartisan work to pull this bill together.

I also would like to specifically recognize Senator HUTCHISON for her great work, and all of the staff—my staff and all of the Senators' staff—who have contributed a great deal of personal time and effort on many of the key provisions of this legislation.

Finally, I would like to acknowledge the work of my colleague, Senator LIEBERMAN, who started in this endeavor with me many months ago.

As Senator ALEXANDER said a few moments ago, we encourage all of our colleagues to join us in cosponsoring this important piece of legislation. Now is the time to act. We have a rare opportunity to put aside our party labels and to put our country first. In many other areas, we should be not Republican, not Democrat, not Independent—we should be Americans. This is such a bill. This piece of legislation is critical for the future competitiveness of our country.

I urge all of our colleagues to join us in this bipartisan effort.

I thank the Chair. I yield the floor.

Mr. ALEXANDER. Mr. President, I would like to acknowledge the role of

Senator ENSIGN in this competitiveness piece of legislation.

It would not have gotten started without him and the work he did with Senator LIEBERMAN in the Council on Competitiveness, and it would not have been finished without he and his staff taking a lead role in helping to bring the Senators together.

It is important the way he characterized this as a progrowth initiative. This is progrowth legislation. It is part of a progrowth agenda. Sometimes we forget that.

It is a great pleasure to work with him on this legislation. I wanted to acknowledge his leadership.

I want to say to the Senator from Massachusetts that I appreciate his leadership on this legislation. He was already a veteran when I was a Senate aide here many years ago. He has been deeply involved in these issues for a long time. He and his staff made it possible for us to bring this to a conclusion.

There are many ideas about how to do this. To have three committees basically unanimously agree that this is how we should begin—there are many other issues to be dealt with. Many of them may be dealt with in amendments after the recess. But without Senator KENNEDY's leadership and without Senator ENSIGN, nothing would have happened.

After Senator KENNEDY's remarks, I would like to say a word about Secretary Spellings' speech today. I appreciate him allowing me to speak now.

The PRESIDING OFFICER (Mr. COLEMAN). The Senator from Massachusetts.

Mr. KENNEDY. Mr. President, I just want to say a few words on the competitiveness legislation to which Senator ALEXANDER and Senator ENSIGN referred. My full statement will accompany the bill's introduction later today, but I do want to mention that I am a very strong supporter of the bill. As Senator ENSIGN and Senator ALEXANDER mentioned, it is the result of a strong bipartisan process.

Americans know how to rise to challenges and come out ahead. We've done it before and we can do it again. We were called into action in 1957 when the Soviet Union sent Sputnik into space. We rose to the challenge by passing the National Defense Education Act and inspiring the nation to ensure that the first footprint on the moon was by an American. We increased the commitment we made to math and science and doubled the federal investment in education.

Money in itself may not be the answer to everything, but it is a very clear indication of a nation's priorities.

Now we are faced with the challenges of globalization, and now we must decide—are we going to get consumed by it, or are we going to embrace the challenge and make sure that every individual, whether in Tennessee or in Massachusetts, is going to be prepared to respond to it; that our States are going to be prepared to respond to it; and that our country is going to be prepared to respond to it? This is critical not only for the sake of our economy, but for the sake of our national security.

We need the same bold commitment today that we made four decades ago, in order to help the current generation meet and master the global challenges of today and tomorrow. The National Competitiveness Investment Act is a strong first step in that effort.

I will not take the time here to review how America is slipping behind in technology and engineering compared to what is happening in India and in China and other countries. But one brutal fact is that the jobs of the future are going to go to the societies and the economies that are on the forefront of innovation. That is where the economic strength is going to be, and it will directly impact our national security. This legislative effort is a very important downpayment on ensuring that the United States is that society at the forefront of innovation. And the legislation is the result of a good deal of work.

The good work of the Senator from Tennessee, Mr. ALEXANDER, of Senator BINGAMAN from New Mexico, and the large bipartisan group the Senator from Nevada mentioned. It stems from the work of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine as well as some very important leaders in the private sector who have played an extremely important role in our efforts to keep America on the cutting edge.

We are also dealing with other important issues that are before the Senate today. But I agree with my colleagues that these issues related to America's competitiveness are issues that Congress needs to act on as soon as possible. It is extremely important.

At a time in Washington when the debate seems to be dominated by partisan politics, it should be reassuring to the American people that we are united in recognizing the importance of investing in America's competitiveness in the years to come. I look forward to working with my colleagues as the bill moves forward to ensure that Congress provides the new investments needed to fully support and build on these important proposals.

IMMIGRATION

Mr. KENNEDY. Mr. President, before the Senate tomorrow, we will be dealing with one of the provisions relating to immigration, the amendment dealing with the fence on the southern border of our country. I would like to address the Senate about this issue and about the general issues of immigration.

We face a clear choice on the bill between two fundamentally different approaches to immigration. We are talking about the underlying legislation on which the majority leader now has put forth a cloture motion, which we will be voting on tomorrow. We will be unable to have any kind of amendments to it. That opportunity has been foreclosed. I think that is regrettable. I think this would have given us an important opportunity for alternatives that have been debated and accepted in the Senate earlier this year. That is the way we have to deal with it in terms of Senate rules and procedures. That is where we are at the present time. We will vote on this tomorrow.

There is no debate about our immigration system being broken and in need of repair. All of us at this point understand that reform is essential. The choice we confront is whether we will answer that call with a decisive vote in favor of comprehensive reform or whether by failing to do so we will defer to the House of Representatives, which has an enforcement-only approach.

I listened to Dr. Land today, who is the President of the Southern Baptist Organization—not recognized as being either a Democrat or liberal figure—talk about the morality of this issue and also about the immorality of the House approach. He commented on a joint press conference he read with great particularity and with the language which is the approach of the House of Representatives included in terms of its immigration bill. He was pointing out that any person of the cloth who cares for the least among us, whether it is food, clothing, or a stranger, any act of general humanity, would be accused of aiding and abetting an undocumented and, under their language, he concluded could be both arrested, tried, and convicted.

He spoke enormously eloquently about the morality of that particular House legislative approach and its inappropriateness, and compared it to the fugitive slave law wherein innocents were helping free slaves in the mid-1800s.

The recent report of the Independent Task Force on Immigration calls immigration the oldest and newest story of the American experience.

Immigration has always been part of our history. It is in our blood and genes. In the beginning, immigrants helped to build our country, make it strong, loved America, and fought under our flag with great courage. Over 70,000 permanent residents have fought in Afghanistan and in Iraq. A number have won medals for bravery and courage. Generations of immigrants have settled here, found a nation that rewarded their hard work, respected their religious beliefs, and enabled them to raise their families.

Immigrants today are no different. They work hard, they practice their faith, they love their families, and they love America.

Today, more than 60,000 immigrants serve in the U.S. military. Many have made the ultimate sacrifice, giving their lives for America on the battlefields of Iraq and Afghanistan. That