Ros-Lehtinen
Roskam
Ross
Rothman (NJ)
Roybal-Allard
Royce
Ruppersberger
Rush
Ryan (OH)
Ryan (WI)
Salazar
Sánchez, Linda T.
Sanchez, Loretta
Sarbanes
Scalise
Schakowsky
Schauer
Schiff
Schmidt
Schock
Schrader
Schwartz
Scott (GA)
Scott (VA)
Sensenbrenner
Serrano
Sessions
Sestak
Shadegg
Shea-Porter
Sherman
Shimkus
Shuler
Shuster
Simpson
Sires
Skelton
Slaughter
Smith (NE)
Smith (NJ)
Smith (TX)
Smith (WA)
Snyder
Space
Speier
Spratt
Stark
Stearns
Stupak
Sullivan
Sutton
Tanner
Taylor
Teague
Terry
Thompson (CA)
Thompson (MS)
Thompson (PA)
Thornberry
Tiahrt
Tiberi
Tierney
Titus
Tonko
Towns
Turner
Upton
Van Hollen
Velázquez
Visclosky
Walden
Walz
Wasserman Schultz
Waters
Watson
Watt
Waxman
Weiner
Welch
Westmoreland
Whitfield
Wilson (OH)
Wilson (SC)
Wittman
Wolf
Woolsey
Wu
Yarmuth
Young (AK)
Young (FL)

NOT VOTING—13

Barrett (SC)
Carnahan
Carney
Cole
Davis (AL)
Hoekstra
Jackson Lee (TX)
Meeks (NY)
Melancon
Putnam
Souder
Tsongas
Wamp

ANNOUNCEMENT BY THE SPEAKER PRO TEMPORE

The SPEAKER pro tempore (during the vote). Members have 2 minutes remaining to vote.

□ 1439

So (two-thirds being in the affirmative) the rules were suspended and the bill, as amended, was passed.

The result of the vote was announced as above recorded.

A motion to reconsider was laid on the table.

Stated for:

Mr. PUTNAM. Madam Speaker, on rollcall No. 260, I was unavoidably detained. Had I been present, I would have voted "yea."

NATIONAL WOMEN'S HEALTH WEEK

The SPEAKER pro tempore. The unfinished business is the vote on the motion to suspend the rules and agree to the concurrent resolution, H. Con. Res. 268, on which the yeas and nays were ordered.

The Clerk read the title of the concurrent resolution.

The SPEAKER pro tempore. The question is on the motion offered by the gentleman from New York (Mr. TOWNS) that the House suspend the rules and agree to the concurrent resolution, H. Con. Res. 268.

This will be a 5-minute vote.

The vote was taken by electronic device, and there were—yeas 418, nays 0, not voting 12, as follows:

[Roll No. 261]

YEAS—418

Ackerman
Aderholt
Adler (NJ)
Akin
Alexander
Altmire
Andrews
Arcuri
Austria
Baca
Bachmann
Bachus
Baird
Baldwin
Barrow
Bartlett
Barton (TX)
Bean
Becerra
Berkley
Berman
Berry
Biggert
Bilbray
Bilirakis
Bishop (GA)
Bishop (NY)
Bishop (UT)
Blackburn
Blumenauer
Blunt
Boccieri
Boehner
Bonner
Bono Mack
Boozman
Boren
Boswell
Boucher
Boustany
Boyd
Brady (PA)
Brady (TX)
Braley (IA)
Bright
Broun (GA)
Brown (SC)
Brown, Corrine
Brown-Waite, Ginny
Buchanan
Burgess
Burton (IN)
Butterfield
Buyer
Calvert
Camp
Campbell
Cantor
Cao
Capito
Capps
Capuano
Cardoza
Carnahan
Carson (IN)
Carter
Cassidy
Castle
Castor (FL)
Chaffetz
Chandler
Childers
Chu
Clarke
Clay
Cleaver
Clyburn
Coble
Coffman (CO)
Cohen
Conaway
Connolly (VA)
Conyers
Cooper
Costa
Costello
Courtney
Crenshaw
Crowley
Cuellar
Culberson
Cummings
Dahlkemper
Davis (CA)
Davis (IL)
Davis (KY)
Davis (TN)
DeFazio
DeGette
Delahunt
DeLauro
Dent
Deutch
Diaz-Balart, L.
Diaz-Balart, M.
Dicks
Dingell
Doggett
Doyle
Dreier
Driehaus
Duncan
Edwards (MD)
Edwards (TX)
Ehlers
Ellison
Ellsworth
Emerson
Engel
Eshoo
Etheridge
Fallin
Farr
Fattah
Filner
Flake
Fleming
Forbes
Fortenberry
Foster
Foxx
Frank (MA)
Franks (AZ)
Frelinghuysen
Fudge
Gallegly
Garamendi
Garrett (NJ)
Gerlach
Giffords
Gingrey (GA)
Gohmert
Gonzalez
Goodlatte
Gordon (TN)
Granger
Graves
Grayson
Green, Al
Green, Gene
Griffith
Grijalva
Guthrie
Gutierrez
Hall (NY)
Hall (TX)
Halvorson
Hare
Harman
Harper
Hastings (FL)
Hastings (WA)
Heinrich
Heller
Hensarling
Herger
Herseth Sandlin
Higgins
Hill
Himes
Hinchey
Hinojosa
Hirono
Hodes
Holden
Holt
Honda
Hoyer
Hunter
Inglis
Inslee
Israel
Issa
Jackson (IL)
Jenkins
Johnson (GA)
Johnson (IL)
Johnson, E. B.
Johnson, Sam
Jones
Jordan (OH)
Kagen
Kanjorski
Kaptur
Kennedy
Kildee
Kilpatrick (MI)
Kilroy
Kind
King (NY)
Kingston
Kirk
Kirkpatrick (AZ)
Kissell
Klein (FL)
Kline (MN)
Kosmas
Kratovil
Kucinich
Lamborn
Lance
Langevin
Larsen (WA)
Larson (CT)
Latham
LaTourette
Latta
Lee (CA)
Lee (NY)
Levin
Lewis (CA)
Lewis (GA)
Linder
Lipinski
LoBiondo
Loebsack
Lofgren, Zoe
Lowey
Lucas
Luetkemeyer
Luján
Lummis
Lungren, Daniel E.
Lynch
Mack
Maffei
Maloney
Manzullo
Marchant
Markey (CO)
Markey (MA)
Marshall
Matheson
Matsui
McCarthy (CA)
McCarthy (NY)
McCaul
McClintock
McCollum
McCotter
McDermott
McGovern
McHenry
McIntyre
McKeon
McMahon
McMorris Rodgers
McNerney
Meek (FL)
Melancon
Mica
Michaud
Miller (FL)
Miller (MI)
Miller (NC)
Miller, Gary
Miller, George
Minnick
Mitchell
Mollohan
Moore (KS)
Moore (WI)
Moran (KS)
Moran (VA)
Murphy (CT)
Murphy (NY)
Murphy, Patrick
Murphy, Tim
Myrick
Nadler (NY)
Napolitano
Neal (MA)
Neugebauer
Nunes
Nye
Oberstar
Obey
Olson
Olver
Ortiz
Owens
Pallone
Pascrell
Pastor (AZ)
Paul
Paulsen
Payne
Pence
Perlmutter
Perriello
Peters
Peterson
Petri
Pingree (ME)
Pitts
Platts
Poe (TX)
Polis (CO)
Pomeroy
Posey
Price (GA)
Price (NC)
Putnam
Quigley
Radanovich
Rahall
Rangel
Rehberg
Reichert
Reyes
Richardson
Rodriguez
Roe (TN)
Rogers (AL)
Rogers (KY)
Rogers (MI)
Rohrabacher
Rooney
Ros-Lehtinen
Roskam
Ross
Rothman (NJ)
Roybal-Allard
Royce
Ruppersberger
Rush
Ryan (OH)
Ryan (WI)
Salazar
Sánchez, Linda T.
Sanchez, Loretta
Sarbanes
Scalise
Schakowsky
Schauer
Schiff
Schmidt
Schock
Schrader
Schwartz
Scott (GA)
Scott (VA)
Sensenbrenner
Serrano
Sessions
Sestak
Shadegg
Shea-Porter
Sherman
Shimkus
Shuler
Shuster
Simpson
Sires
Skelton
Slaughter
Smith (NE)
Smith (NJ)
Smith (TX)
Smith (WA)
Snyder
Space
Speier
Spratt
Stark
Stearns
Stupak
Sullivan
Sutton
Tanner
Taylor
Teague
Terry
Thompson (CA)
Thompson (MS)
Thompson (PA)
Thornberry
Tiahrt
Tiberi
Tierney
Titus
Tonko
Towns
Tsongas
Turner
Upton
Van Hollen
Velázquez
Visclosky
Walden
Walz
Wasserman Schultz
Waters
Watson
Watt
Waxman
Weiner
Welch
Westmoreland
Whitfield
Wilson (OH)
Wilson (SC)
Wittman
Wolf
Wu
Yarmuth
Young (AK)
Young (FL)

NOT VOTING—12

Barrett (SC)
Carney
Cole
Davis (AL)
Donnelly (IN)
Hoekstra
Jackson Lee (TX)
King (IA)
Meeks (NY)
Souder
Wamp
Woolsey

ANNOUNCEMENT BY THE SPEAKER PRO TEMPORE

The SPEAKER pro tempore (during the vote). Members have 2 minutes left on this vote.

□ 1447

So (two-thirds being in the affirmative) the rules were suspended and the concurrent resolution was agreed to.

The result of the vote was announced as above recorded.

A motion to reconsider was laid on the table.

Stated for:

Ms. WOOLSEY. Mr. Speaker, on May 12, 2010, I was unavoidably detained and was unable to record my vote for rollcall No. 261. Had I been present I would have voted: Rollcall No. 261. "Yes"—Supporting the goals and ideals of National Women's Health Week, and for other purposes.

□ 1445

GENERAL LEAVE

Mr. GORDON of Tennessee. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days within which to revise and extend their remarks and include extraneous material on the bill, H.R. 5116, the America COMPETES Reauthorization Act.

The SPEAKER pro tempore. Is there objection to the request of the gentleman from Tennessee?

There was no objection.

AMERICA COMPETES REAUTHORIZATION ACT OF 2010

The SPEAKER pro tempore. Pursuant to House Resolution 1344 and rule XVIII, the Chair declares the House in

the Committee of the Whole House on the state of the Union for the consideration of the bill, H.R. 5116.

□ 1450

IN THE COMMITTEE OF THE WHOLE

Accordingly, the House resolved itself into the Committee of the Whole House on the State of the Union for the consideration of the bill (H.R. 5116) to invest in innovation through research and development, to improve the competitiveness of the United States, and for other purposes, with Ms. NORTON in the chair.

The Clerk read the title of the bill.

The CHAIR. Pursuant to the rule, the bill is considered read the first time.

The gentleman from Tennessee (Mr. GORDON) and the gentleman from Texas (Mr. HALL) each will control 30 minutes.

The Chair recognizes the gentleman from Tennessee.

Mr. GORDON of Tennessee. Madam Chair, I yield myself such time as I may consume.

On October 12, 2005, in response to a bipartisan request by the Science and Technology Committee and some of our colleagues in the Senate, the National Academies released the report ''Rising Above the Gathering Storm.'' The distinguished panel, led by Norm Augustine, the former CEO of Lockheed Martin, and which also included Craig Barrett of Intel, the current Secretary of Energy, Steve Chu, and a cast of other distinguished academic and business leaders, painted a very dire picture. The report made clear that without action, the future was bleak for our children and grandchildren. This report was, without question, a call to arms.

The Science and Technology Committee, along with several committees in the Senate, moved forward by turning the ''Gathering Storm'' recommendation into legislative language. The final result was the enactment of the America COMPETES Act of 2007, with the bipartisan support of 365 Members. Moreover, with the leadership of Senators ALEXANDER and BINGAMAN and 69 Senate cosponsors, the Senate approved the conference report by unanimous consent. Now, after 3 years, we are back to work on reauthorizing the America COMPETES Act.

Since the enactment of America COMPETES, the Science and Technology Committee has held 48 hearings on areas addressed in the bill considered by the House today. Going through regular order, our subcommittee, in a bipartisan process, brought the full committee to a strong body of work. The bill was approved by the Science and Technology Committee on April 28, with a bipartisan vote of 29–8.

I want to thank all of the members of our committee for their work, and more importantly, their contribution to this bill.

Since I became chairman of the committee, it has been my goal for this to be a committee of good ideas and consensus. But more importantly, I have wanted an inclusive process that encouraged members on all sides to bring forward ideas and to discuss them.

I am proud of the process that we've used in bringing this bill to the House, and I believe this is a better bill today because of the hard work of our members. So I thank them for their efforts.

I would also like to thank the majority and minority staffs for the many hours of thoughtful work they have committed to this bill.

Many significant pieces of legislation come before this House. We all know that. But, honestly, I feel strongly that this bill is a big deal and it's important. It's a big deal and important for our country and for this Congress. It's a big deal and an important step in leading our Nation's innovation agenda in the face of growing global competition. It's a big deal and important for the business community, including the U.S. Chamber of Commerce, the National Association of Manufacturers, and the Business Roundtable, which is why they have been so supportive. It's a big deal and important to our universities and our national labs, and it's a big deal and important to our children and grandchildren so they will not be the first generation of Americans to inherit a standard of living lower than their parents.

If we are to reverse the trend of the last 20 years where our country's technological edge in the world has diminished, we must make the investments necessary today. The statistics speak for themselves. More than 50 percent of our economic growth since World War II can be attributed to the development and adoption of new technologies.

The path is simple. Research and education lead to innovation. Innovation leads to economic development and good-paying jobs and the revenue to pay for more research. And as private firms underinvest in research and development because the returns are too far off in the future, there is a clear and necessary role of government to help our Nation keep pace with the rest of the world.

To quickly summarize, the America COMPETES Reauthorization Act of 2010, H.R. 5116, makes investments in science innovation, education to strengthen U.S. scientific economic leadership, supports business, and creates jobs in the short, mid, and long term.

In the short term, Federal programs like the innovative technological Federal loan guarantees addresses the immediate need of small- and medium-sized manufacturers. In the midterm, the bill will strengthen regional economies through programs like the regional innovation clusters.

To ensure its scientific and technological leadership now and long into the future, the bill makes investments in the basic research. The bill includes a reauthorization of the Advanced Research Projects Agency for Energy, ARPA-E. Even before the price of oil hit today's record highs, ''Gathering Storm'' recommended greater energy independence. But as we move to a cleaner, more efficient and more balanced economic portfolio, we should not trade our dependency on foreign oil for a dependency on foreign technology. This is why ARPA-E is so important.

The bill also includes an authorization for Energy Innovation Hubs which will each focus on overcoming a single technological barrier to achieving our national energy innovation goals. The bill will double authorization funding for our basic research programs, the National Science Foundation, the Department of Energy Office of Science, the labs at the National Institute of Standards and Technology over the next 10 years.

Throughout the committee process, there was a lot of legitimate discussion about Federal deficits. And I agree, we must address the challenges presented by our deficits, but we also must invest in our country's future. I remember Newt Gingrich saying one of his greatest regrets was not doubling the funding for NSF when he put NIH on a doubling path.

During the committee consideration of this bill, we made some significant changes to the bill's authorization levels. But we will maintain a doubling path for our research accounts over the next 10 years. We do so on a slightly less aggressive trajectory.

The bill, as introduced, included authorizations totaling approximately $93 billion over 5 years. The bill we consider today includes authorizations of approximately $84 billion. This represents a 10.3 percent reduction in funding for the introduction of the bill, or a reduction of more than $9.6 billion over 5 years.

This bill provides a stable, sustainable, and achievable set of authorization levels that balance the importance of these investments with the reality of our current budget deficits.

Another important element of the funding roadmap in the bill is certainty. As we know, most successful businesses do not operate in a 1-year timetable. They generate plans years in advance. In fact, many businesses operate using at least a 5-year plan. So as we continue to climb out of the worst economic downturn in a generation, we need a 5-year plan to reinvest in our intellectual capital, our research enterprise, and our workforce training. This becomes even more important when comparing our efforts to other nations.

Our global competitors, most notably China, increase innovation in 5-year windows. They write a 5-year plan, watch its progress, and in year 4, they begin on the next 5-year plan. The time has come for our country to establish a clear path forward with a thoughtful, responsible 5-year plan.

Finally, let me say that more than 50 years ago when DARPA was first created, no one had an idea that the research it would fund would be responsible for creation of the Internet or the proliferation of GPS technologies, but it did. Those innovations started with Federal dollars, as did countless other game-changing technologies.

□ 1500

There is an undeniable relationship between the investment in R&D and the creation of jobs, the creation of companies, and economic growth. But don't just take my word for it. The Joint Economic Committee released a report this week that shows the economic benefits from Federal investment in research.

The Science Coalition, a nonprofit, nonpartisan organization of the Nation's leading research universities, released a report this week entitled ''Sparking Economic Growth: How Federally Funded University Research Creates Innovation, New Companies, and Jobs.'' This report tells the stories of 100 companies, including Google, Cisco, SAS, Genentech, Orbital Sciences, Sun Power, Medtronic, and Hewlett-Packard, that were all created based on research funded with Federal dollars.

And, last, there are the sponsors of this important legislation. The U.S. Chamber of Commerce, the Business Roundtable, the National Association of Manufacturers, the Council of Competitiveness, the Task Force of American Innovation, the American Chemical Society, as well as a growing list of over 1,000 major companies, universities, trade associations, and professional organizations, all understanding the benefits to U.S. companies of making a sustained commitment to research and STEM education.

COMPETES is and will continue to be a bipartisan, bicameral effort that every Member of this House can feel ownership of and should take bragging rights on.

I reserve the balance of my time.

Mr. HALL of Texas. Madam Chair, I yield myself such time as I may consume.

I rise today to speak on H.R. 5116, a bill reauthorizing the America COMPETES Act. COMPETES was originally authorized in 2007 in response to recommendations in the National Academies Report, ''Rising Above the Gathering Storm,'' and initiatives proposed in President Bush's American Competitiveness Initiative that stressed the need for increased investments in basic science research and development. The 2007 House-passed bill was a 3-year authorization that placed three agencies, the National Science Foundation, the National Institute of Standards and Technology, and the Office of Science at the Department of Energy on a 10-year doubling path.

I remain committed to the underlying goals of the America COMPETES Act. I like the thrust. I like the goals. Most of us on our side of the docket did. We believe that we should continue to prioritize investments in basic research and science, technology, engineering, and mathematics—the STEM—education. These long-term investments, coupled with policies that reduce tax burdens, streamline Federal regulations, and balance the Federal budget, are necessary steps for our Nation to remain competitive in the global marketplace.

However, the bill goes far beyond the original intent and scope of the COMPETES legislation. One of my primary concerns is the cost of the overall package. At $86 billion, it represents over $22 billion in new funding above the fiscal year 2010 basic level. Even if you consider the 10-year doubling path for the three agencies as opposed to flat funding, the bill is still almost $8 billion over that amount.

It is also important to note that these agencies received an additional $5 billion in the American Recovery and Reinvestment Act. Given the current state of our national economy and the fact that our Nation's budget deficit has increased 50 percent since the last authorization 3 years ago, we have to be mindful of our spending if America is to continue to compete globally.

I am also concerned by the creation of several new programs in this bill, including Energy Innovation Hubs at DOE, a loan guarantee program at the Department of Commerce, and regional innovation clusters at the Department of Commerce. Several of these new programs fund activities beyond basic science research and development, and many are potentially duplicative of current efforts and could divert money away from priority basic research.

Given the number of new programs in this bill, it is especially troubling that the authorization length is 5 years, as it limits congressional oversight opportunities and calls for out-year funding increases without regard to the current and future fiscal environment.

At the full committee markup in April, Republicans offered 39 amendments to, among other things, address increased costs, shifts in priorities, duplications of programs, and congressional oversight. Some of these concerns will be debated today as part of our amendment process.

Before I close, I would also like to thank and acknowledge my staff for all of the hard work they have done on this bill. I also want to thank Chairman GORDON and his staff for all of their efforts. Chairman GORDON and I have worked together in this body for several years, and I will absolutely miss working with him when he retires at the end of this year. As a matter of fact, as he leaves this session, I hope we can name part of this program after BART GORDON because he is the father of it.

I reserve the balance of my time.

Mr. GORDON of Tennessee. Madam Chair, how much time do we have?

The CHAIR. The gentleman from Tennessee has 20½ minutes remaining.

Mr. GORDON of Tennessee. Madam Chair, I yield to the gentleman from Oregon (Mr. WU), the chairman of our Technology and Innovation Subcommittee, 1½ minutes.

Mr. WU. I thank the chairman.

I rise today in strong support of America COMPETES, and I want to recognize the tremendous leadership which Chairman GORDON has given in this effort. He is the father of this bill. He has created the ARPA–E energy initiative in this bill and has shown tremendous leadership by pushing this effort forward.

I am particularly proud of the contribution that my subcommittee, the Technology and Innovation Subcommittee, has made to this legislation. Innovation is absolutely crucial to our Nation's long-term global competitiveness. It is our economic seed corn, and we have a responsibility to support the kind of economic environment that empowers our Nation's private sector to innovate and create jobs.

The bipartisan legislation we are considering today will strengthen our Nation's economic competitiveness by creating an environment that encourages innovation and facilitates economic growth. It will create high wage, middle class jobs through innovation and technologic development. Among other things, the bill makes critical investments in the Manufacturing Extension Partnership, which will help this vital program better address the needs of our Nation's small- and medium-sized manufacturers.

Of particular importance is the new focus of the MEP program on finding out what the local job market really needs and helping community colleges focus job training on these particular needs so that the retrained workers can find work nearby. America COMPETES is the cornerstone of our Nation's global competitiveness, and today's reauthorization bill represents another crucial step in implementing the innovation agenda.

Mr. HALL of Texas. Madam Chair, I yield 4 minutes to Mr. SENSENBRENNER, the gentleman from Wisconsin.

Mr. SENSENBRENNER. I thank the gentleman for yielding.

Madam Chairman, I rise today in opposition to H.R. 5116, the America COMPETES Reauthorization Act. Madam Chairman, I support efforts to invest in science and technology. In these tough economic times, we must look ahead and recognize the necessity of research and experimentation in developing new products and improving existing ones. If the U.S. wants to remain the leader in technological innovation, it is imperative that we invigorate investment in private sector innovation so that we can expand our global leadership in high technology and spur greater economic growth domestically.

As the former chairman of the House Science Committee, I understand the importance of promoting policies that strengthen America's technological

leadership, and recognize the endless economic benefits when innovation takes place. However, once again, we are seeing the majority ignore rising deficits and continue on the path of reckless spending. As some of my colleagues have already noted, this legislation includes $22 billion in new funding over this year's base. Our national debt stands at $13 trillion, and our deficits are up 50 percent over the past 3 years. The majority cannot continue to pile the debt upon our children and grandchildren.

It strikes me as odd that we are ramping up funding for this act when the programs that it funds are only starting to be implemented. Without having the opportunity to perform proper oversight to know which programs are effective and which are not, it appears that we are simply here today to throw another $86 billion at the wall to see what sticks.

The legislation before us goes beyond basic research and development activities. It creates several duplicative and unnecessary programs. Take, for example, the creation of the new Energy Innovation Hub program. The administration's fiscal year 2011 budget included funding for a hub on batteries and energy storage; however, budget documents indicate that there are at least five other DOE programs which conduct similar energy storage R&D activities. Unfortunately, this is not the only example of a proposed hub that appears to duplicate existing R&D efforts.

Additionally, this legislation not only dramatically increases spending, but shifts the focus of the original America COMPETES Act of basic research to increased spending on later-stage technology development and commercialization efforts. I do not believe that the government ought to be in the business of picking winners and losers; however, that is exactly what the provisions of this legislation attempt to do.

Throughout the legislation, there is an emphasis on climate change research and reduction of greenhouse gas emissions. It troubles me to see in a competitiveness bill the prominence of reducing greenhouse gas emissions as a policy objective. This legislation effectively seeks to prohibit the pursuit of technologies that would advance energy independence through expanded supplier production of domestic energy resources.

In order for the U.S. to continue to compete and to be an innovative leader throughout the world, we must ensure we devote the proper resources and incentives in basic research and development. However, this legislation is not the answer. I urge a ''no'' vote on this bill.

Mr. GORDON of Tennessee. Madam Chair, I yield 1½ minutes to the subcommittee chairman of the Research and Science Education Committee, Dr. LIPINSKI.

Mr. LIPINSKI. Madam Chair, I rise in strong support of this bill, and I want to thank Chairman GORDON for his tremendous leadership on this issue. Passage of this bill will help produce a brighter future for our Nation and our Nation's workers or, put more simply, this bill means jobs.

As a former college professor, an engineer, and a ceaseless advocate for American manufacturing, I want to focus on the National Science Foundation title, which comes from my bill, H.R. 4997. Besides keeping NSF on its doubling path, it significantly increases support for basic research, STEM education, graduate education, and technology transfer. That is turning research into jobs.

In addition to our newly created NSF manufacturing and research program and a reauthorization of the National Nanotechnology Initiative, it includes a funding increase for MEP programs and a new innovative technology loan guarantee program.

The COMPETES Act also includes provisions to address the serious deterioration in the state of our research infrastructure, both at universities and our national labs, which threatens America's competitiveness. In addition, the GENIUS Act is included, a bipartisan bill I introduced with Representative WOLF to allow the NSF to offer innovative inducement prizes.

The COMPETES Reauthorization Act takes a proactive and bipartisan approach to securing America's position in a 21st century global economy and creating jobs, and I urge my colleagues to vote for this bill.

Mr. HALL of Texas. Madam Chairwoman, I yield 3 minutes to the gentlelady from Illinois, a member of the committee, Mrs. BIGGERT.

Mrs. BIGGERT. I thank the gentleman for yielding, and Madam Chair, I rise in support of H.R. 5116, the America COMPETES Reauthorization Act of 2010.

I commend Chairman GORDON and Ranking Member HALL for their efforts to move this bill through regular order and for working with Members on both sides to make improvements to the bill.

Like many of my colleagues here, I strongly supported in 2007 the original America COMPETES Act, which became our Nation's first coordinated and strategic investment plan aimed at maintaining U.S. leadership in science and technology.

Based on the recommendations in the National Academies report, ''Rising Above the Gathering Storm,'' this bill we are considering today will build on the investments of the 2007 legislation and preserve U.S. leadership in math, science, and engineering education, and basic research development and commercialization opportunities for our country.

As some have suggested, H.R. 5116 is not without flaws. I share the concerns my colleagues have about the creation of new programs and higher funding levels contained in the bill. Some of our concerns were addressed in committee, some were not. That said, I also urge my colleagues to keep in mind that this bill is, above all else, an investment in scientific advancement, with proven economic returns for many years to come.

At the heart of the COMPETES Act is the reauthorization of the Department of Energy's Office of Science and the National Science Foundation, two programs that form the backbone of basic research and education in universities and laboratories across the country. Their reauthorization is critical to America's ability to maintain a technological and competitive edge over our European and Asian competitors in the global economy.

□ 1515

In particular, the Office of Science supports 40 percent of basic research in the United States and ensures that the U.S. retains its dominance in such key scientific fields as nanotechnology, materials science, biotechnology, and supercomputing—all areas in which emerging technology is laying the groundwork for a new generation of products and services. The Office of Science is especially critical to States like Illinois, where university and laboratory research and development supports 68,000 high-tech jobs, according to the Illinois Science and Technology Coalition. Furthermore, the Office of Science maintains large-scale user facilities like at Argonne National Laboratory in my district. These facilities provide scientists from both the public and private sector with the tools that they need to turn groundbreaking research into real, tangible tools and benefits for consumers, patients, energy users, and other sectors. In my district alone, dozens of firms have spun off from the research started at Argonne and gone on to become major employers and economic leaders.

Consider this. In 1 year, the user facility at Argonne will host 3,500 researchers from 50 States, 145 U.S. companies, and 265 universities.

The CHAIR. The time of the gentlewoman has expired.

Mr. HALL of Texas. Madam Chairwoman, I yield the gentlewoman 1 additional minute.

Mrs. BIGGERT. Without this support, research breakthroughs in AIDS medications, alternative fuels, and infrastructure materials would not have been possible. Fortunately, with this reauthorization of COMPETES, we will have the ability to realize the promises of scientific innovation much faster.

Too often, I hear from small businesses in my district about what I call the ''valley of death''—that period when a firm has developed a new technology but faces difficulty commercializing it and moving it into the market. By facilitating commercialization and opening access to advanced Federal facilities, this bill removes those hurdles.

Madam Chairman, in a struggling economy where investment dollars are

scarce and new opportunities are at a premium, we should put our Nation's immense scientific talent and extensive infrastructure to work creating and developing the products and jobs of tomorrow.

With that, I would urge my colleagues to support this bill.

Mr. GORDON of Tennessee. Madam Chair, let me first point out that my friend from Texas (Mr. HALL) is not doing a Roy Orbison impersonation today. He had a cataract removed earlier and that's the reason he periodically is wearing his sunglasses. A lesser person wouldn't have made it today. I compliment Mr. HALL for being here.

I yield 1 minute to our very distinguished majority leader, the gentleman from Maryland, STENY HOYER.

Mr. HOYER. I thank the gentleman from Tennessee, the chairman of the committee, for yielding. I congratulate Mr. HALL, my good friend from Texas, for his leadership. And I rise in support of the America COMPETES Act.

I want to congratulate Mr. GORDON in particular. Mr. GORDON has been focused on the subject matter of this bill—innovation, entrepreneurial efforts, science, technology, math, and engineering efforts—to make our economy more competitive worldwide and more vibrant here at home. This bill creates jobs in the short term and builds a strong foundation for prosperity in the long term. That's what we need to be focusing on. That's what Americans want us to focus on. They want us to get jobs now. But they also want to have a resilient, growing economy for the future. We can accomplish both goals by expanding our support for research and development so that the United States remains the world's technology leader.

This bill establishes innovative technology Federal loan guarantees for small- and medium-sized manufacturers. Those loans, which are especially needed at a time when credit is tight, will help our businesses keep pace with a changing economy, increase productivity, and hold their own with overseas competitors. By supporting innovation, as this bill does, this bill will help those businesses save and create jobs. It will also promote job growth and innovation on the regional level by creating regional innovation clusters—collections of local businesses that collaborate on emerging technology in similar fields.

As Chairman BART GORDON of the Science and Technology Committee has observed, ''Clusters can strengthen or revive a region's economy and can advance the work being done in their field by bringing their leaders together to share ideas and build off one another.'' I agree with that comment. That's why I think they're so important.

However, as Mike Muro of the Metropolitan Policy Program at the Brookings Institution points out, America ''lags other nations in fostering these distributed, bottom-up systems of business development, innovation, and talent matching. The time has come,'' Mr. Muro went on, ''for America to make regional industry networks a defining aspect of the Nation's effort to catalyze the next era of high-quality job creation and growth.'' BART GORDON and the Science and Tech Committee have done that. I congratulate them for that. It's an encouraging step that this bill does just that.

In addition, the America COMPETES Act helps ensure that our workforce will meet the challenges of the 21st century economy, by investing in science, technology, engineering, and mathematics. It reauthorizes and increases funding for the vital National Science Foundation, which promotes cutting-edge research by funding innovation in fields from computer science to mathematics to genomics.

Madam Chair, Federal support for research is one of the best investments we can make. I congratulate Mr. GORDON, again, not only on his leadership on this bill, but on his leadership through the decades that he has served in this institution on these very issues. Federally supported research gave us GPS, the computer mouse, computer-aided design, and the Internet. There's no telling the ways in which it might shape our lives in the years to come. The legacy that Mr. GORDON will leave—unfortunately, he's leaving our midst at the end of this year, voluntarily, deciding to do some other things. I congratulate him, though, on the extraordinary contributions he's made during his years of service here.

In a competitive world economy, the National Science Foundation reported that our R&D expenditure has fallen as a share of the world total, as the growing Asian economies gain a greater share. This bill can, and will, help reverse that trend. The America COMPETES Act won bipartisan support the first time Congress authorized it in 2007. I hope and expect that that bill will garner such bipartisan support that it deserves this time around.

Again, in closing, Madam Chair, let me congratulate Mr. GORDON and thank Mr. HALL for his role.

Mr. HALL of Texas. Madam Chairwoman, may I inquire as to how much time I have left?

The CHAIR. The gentleman from Texas has 19 minutes remaining.

Mr. HALL of Texas. I thank the chairwoman.

Madam Chair, I yield 5 minutes to the gentleman from California (Mr. ROHRABACHER).

Mr. ROHRABACHER. Madam Chair, I rise in opposition to H.R. 5116, but let me begin by congratulating Chairman GORDON for the great leadership that he's provided while he's been chairman of the committee, as well as the great cooperation and leadership that Ranking Member HALL has provided us. These two gentlemen have exemplified the very best of our democratic system. Back now to this piece of legislation, however.

The theoretical purpose of the America COMPETES Reauthorization Act is to enhance the Nation's long-term economic competitiveness through investments in science and technology. I support this laudable goal, as I have for more than 21 years as a member of the Committee on Science and Technology, including 10 years in which I was a subcommittee chairman. But I cannot support this legislation which, simply put, authorizes too much funding in too many wrongheaded ways.

While I'm certain this bill was drafted with the best of intentions and motivations, I strongly disagree that this is in our Nation's best interests. American investments in science and technology cannot operate in a vacuum. We need a broader strategy that prioritizes spending, reduces debt, eliminates deficits, and provides clarity, stability, and the appropriate regulatory environment. Only this combined policy, with all of the difficult analysis and hard choices that it entails, will allow America to maintain our technological edge. But this legislation makes no choices. It simply authorizes more and more spending.

We cannot enhance our long-term competitiveness by mortgaging the future of our children and grandchildren. That is precisely what this legislation does. The Congressional Budget Office says that implementing this legislation will cost $85 billion, a 32 percent increase over the FY 2010 baseline. This will clearly elevate the level of deficit spending for our country. We're talking about borrowing money from China and other foreign nations to meet the goals of this legislation. It's new spending on top of old, creating towering debt. Like a game of Jenga, we're eroding the base by piling even greater burdens on an increasingly unstable system, hoping that the whole thing won't just fall apart while we're holding the ball. Well, instead, if we manage to get through this without a total collapse, the way our country is going, we will be burying our children in debt. And that is not an option we should be advocating. We should go at the debt legislation by legislation, as we are today.

At the same time, in this legislation there is no prioritization of programs and spending, no attempt at increasing efficiencies or at restructuring programs that would be expected to be reauthorized in a bill of this size and complexity. There aren't even any commonsense safeguards to make sure that these funds won't promote foreign competitors. If we finance foreign researchers who then return home with their new capabilities, it certainly won't help America compete. Perhaps, if the money will go to train foreigners and subsidize companies not owned by Americans, we should name this the America DEPLETES Act. Creating new Federal programs or expanding existing programs should always be done with caution and oversight. Establishing new programs, especially in times of economic downturn, means increasing deficit spending, which in

itself is something that will drag down productivity and economic activity.

Along with some good things, this legislation creates new programs which are unnecessary and wasteful and which, as some of my fellow colleagues have already pointed out, are redundant to existing programs. All of this while increasing the level of deficit spending. This is not a roadmap to progress for a better future. It's just another well-intentioned spending program, financed by borrowing, that will propel America over the economic cliff to which we are headed.

Over this last year, spending more, borrowing more, taxing more, subsidizing more, and running up the level of Federal deficit spending at such a record pace has not spurred our economy. It has not caused economic growth or reversed the economic crisis and challenge which we find ourselves confronting today. I believe those pushing this legislation are well-intentioned, but they're not diligent. Diligence would require prioritization, program restructuring, regulatory relief, and tearing down the roadblocks to using the technologies that we already have, rather than just spending more and more.

So, with that, I suggest that there are good parts to this bill, but I would have to rise in opposition.

□ 1530

Mr. GORDON of Tennessee. Madam Chair, I yield 1½ minutes to the gentleman from Washington, Dr. Baird, the outstanding subcommittee chairman of the Energy and the Environment Subcommittee.

Mr. BAIRD. Madam Chair, I think one of the best things that can happen to a Member of Congress is the privilege to serve on a committee you are passionate about and with a chairman and ranking member who you have deep respect for, and that certainly applies to the Science Committee chairman and ranking member.

America COMPETES is about jobs; it is about energy independence; it is about better foreign policy; and it is about leaving a cleaner, healthier environment for our children and our grandchildren. Contrary to some of the things some of the opponents have said, this is, in fact, one of the very best investments we can make in our future. Every day and in this room today are young Americans watching this process. This bill is about their future. It's about whether they'll have qualified, well-trained scientists, engineers and mathematicians as professors and mentors. It's about whether this country will have the technology to lead the world in the next century and the rest of this century on energy independence. It is about discoveries that will transform lives and transform this Nation.

I'm particularly proud of the authorization work in this to reauthorize the DOE Office of Basic Science. They produce outstanding work, as my colleague Mrs. BIGGERT said earlier, but I am also particularly impressed with some of the new programs of the original America COMPETES, notably the ARPA–E program. If anything this Congress does is going to turn around the economy not just for the short term but for the long term, it is innovations like that which will result from the authorization of the America COMPETES Act, ARPA–E, NSF reauthorization, NIST, and all of the other elements. This is critical legislation, absolutely critical for the future strength, national security, economic health and jobs of our citizens, and I urge its passage.

Mr. HALL of Texas. Madam Chairman, I reserve the balance of my time.

Mr. GORDON of Tennessee. Madam Chair, I recognize for 1½ minutes the gentlelady from Texas (Ms. EDDIE BERNICE JOHNSON), a valued member of the Science and Technology Committee.

Ms. EDDIE BERNICE JOHNSON of Texas. Madam Chair, I rise in support of H.R. 5116, the America COMPETES Reauthorization Act. My colleagues and I on the Committee on Science and Technology have held numerous hearings and markups to prepare the legislation that is before us today. It puts the National Science Foundation and the Department of Energy's Office of Science on a path to double their research budgets, and it's needed. It will prepare thousands of new teachers and provide current teachers with better materials and skills by reauthorizing the Noyce Teacher Scholarship Program. It also reauthorizes grant programs to increase the number of advanced placement teachers in high-need schools and provides students in high-need communities with access to laboratory experiences. As women and minorities continue to be underrepresented in the sciences, the America COMPETES Act includes many provisions that will strengthen diversity in our Nation's scientific enterprise.

I am pleased that during committee we prohibited the consolidation of programs that serve minority institutions and students. I also applaud the committee for including the Fulfilling the Potential of Women in Academic Science and Engineering Act, which is important legislation that I sponsored for two Congresses. I also applaud many of the other provisions in this legislation that promise to ensure America COMPETES includes all Americans. These provisions will have schools around the Nation elevate their math and science programs so that they can achieve the standard exemplified by the School of Science and Engineering at Townview in Dallas. This school is rated the best in the Nation among public high schools and has been that for 10 years.

Madam Chair, I want to commend Chairman GORDON and Ranking Member HALL for their hard work on this legislation. This bill was put together in a bipartisan fashion. It represents a concerted effort to create a more competitive science and engineering workforce. I support this bill, Madam Chair, and I urge my colleagues to vote in favor of it.

Mr. HALL of Texas. Madam Chairman, I continue to reserve the balance of my time.

Mr. GORDON of Tennessee. How much time is remaining?

The CHAIR. The gentleman has 13½ minutes remaining on his time.

Mr. GORDON of Tennessee. Thank you, Madam Chair.

I yield 1½ minutes to the gentlewoman from Arizona (Ms. GIFFORDS), the chairman of the Space and Aeronautics Subcommittee.

Ms. GIFFORDS. Madam Chair, first I would like to congratulate Chairman GORDON and also Ranking Member HALL for this legislation. Three years ago, this body recognized the importance that science and technology play on our 21st century workforce, and we took action by passing the America COMPETES Act of 2007. We heeded the warnings from the National Academies' report, ''Rising Above the Gathering Storm.'' American students were falling behind in science and mathematics, and with their falling grades went our ability to remain competitive in this new global economy. That's why I offered amendments 3 years ago to help students from low-income and rural parts of America to get the support they need to pursue careers in science, technology, engineering and mathematics. But we're not through the woods yet. Today we renew our commitment by maintaining America's leadership by reauthorizing this legislation.

This bipartisan bill is exactly the sort this Congress should be focusing on. It's about the economy; it's about jobs; it's about innovation; and it's about preparing for tomorrow. I want to take a moment to mention a particular component of this legislation which I am particularly proud to support. Earlier this year, I introduced the 21st Century Graduate STEM Education Act which is now incorporated into this legislation. We need to do everything we can to ensure that our students at every level have the best STEM education in the world so that they can enter the workforce and thrive. The grants created by this act will help equip graduate students in the STEM fields with the skills and knowledge for careers so that they can be successful outside of the traditional academic track.

We need to see more engineers. We need to see more mathematicians. We need to see more scientists. We need to see more Ph.D.- and master's-level scientists and engineers teaching in schools, providing the next generation of students with a solid foundation in math and science.

Mr. HALL of Texas. Madam Chairman, I continue to reserve the balance of my time.

Mr. GORDON of Tennessee. Madam Chairman, I yield 1½ minutes to the

gentleman from North Carolina (Mr. MILLER), the chairman of the Oversight Committee.

Mr. MILLER of North Carolina. Madam Chair, if the next generation of Americans is to be as prosperous as ours, we must regain our edge in technology, innovation and education. Even before the Great Recession, the industries that North Carolinians long relied upon—textiles, tobacco, furniture—suffered one loss after another, and most of our lost jobs are not coming back. New jobs will either come from science and research, or they won't come at all.

New technologies create new jobs, and America must lead the way in developing new technologies and in bringing those technologies to the marketplace. This bill will provide loans to help small businesses keep their current employees and hire more. Universities and private companies in my district are already leaders in many emerging technologies, including advanced energy technologies; and we will greatly benefit from the provisions of this bill that will create regional economies around existing areas of expertise for innovation hubs. Finally, this bill's investment in basic research will create jobs that we cannot now even imagine.

On behalf of North Carolinians worried about what the future holds for their children, I urge support of this bill, and I thank Chairman GORDON for his tireless work.

Mr. HALL of Texas. Madam Chairwoman, I continue to reserve the balance of my time.

Mr. GORDON of Tennessee. Madam Chairman, I yield 1½ minutes to the gentlewoman from Ohio (Ms. FUDGE), another valued member of our committee, a new but active member.

Ms. FUDGE. Madam Chairman, I too congratulate Chairman GORDON and Ranking Member HALL on this landmark legislation. I am proud to have had the opportunity to work with them on this critical initiative. I represent Cleveland, an area that is rapidly strengthening its science and technology resume. In my district, the Cleveland Clinic and University Hospitals are performing revolutionary biomedical research. Research and development efforts are supported by the students and faculty at Case Western Reserve University, one of the leading research universities in the country. Also, the Ohio STEM learning network, a paragon of STEM learning, has expanded education to traditionally underrepresented groups and is being modeled in other areas of the country.

There is still work to be done. Collaboration among Federal agencies is essential, which is why I have incorporated an amendment in committee that would instruct the NSF, NIH, and the Department of Education to collaborate in identifying grand challenges in education research and then determine what specific role each agency should play. This section of COMPETES instructs these agencies to solicit input from a variety of stakeholders in STEM education, those who know best the needs of a STEM community. This will ensure that the research performed is relevant and useful.

The America COMPETES Act draws attention to what we really need to focus on to continue our leadership and innovation: STEM education and research and development. I urge my colleagues to support this legislation.

Mr. HALL of Texas. Madam Chairman, I continue to reserve the balance of my time.

Mr. GORDON of Tennessee. Madam Chair, I yield 1½ minutes to the gentleman from Wisconsin (Mr. KIND), the chairman of the New Dems.

Mr. KIND. Madam Chair, I thank my good friend and colleague from Tennessee for yielding me this time. As one of the co-chairs in the New Dem Coalition, Madam Chair, I rise in strong support of reauthorization of the America COMPETES Act. The New Democratic Coalition was strongly behind the creation of America COMPETES in 2007, as we stand with this reauthorization bill today.

I want to commend the leadership of the Science Committee and all the members for producing this legislation, but especially our good friend from Tennessee, Chairman GORDON, for the vision and the leadership that he has shown on this issue. Unfortunately, we're going to be losing Representative GORDON to retirement this year, but I can't think of a more powerful or lasting legacy for any Member to leave with than with the creation of the America COMPETES Act.

What this legislation is about is making sure the United States of America remains the most innovative and creative Nation in the world, that we stay on the cutting edge of scientific, medical and technological discoveries and breakthroughs, that we're making sensible investments in basic and applied research and also in workforce development areas, especially in those crucial fields of study, such as science, technology, engineering, and math.

We have a choice to make today, whether to support these investments or not and watch other nations in the world do this for us. This bill is based on the seminal studies that have occurred previously through the National Academy of Science, ''Rising Above the Gathering Storm,'' or even before that with the John Glenn Commission ''Before It's Too Late.'' So the information is in. The studies are complete. We know what we have to do, and this is one of those fundamental building blocks to establish the groundwork for long-term sustainable economic growth. In short, this is about jobs today, tomorrow, and in the future. I encourage my colleagues to support this reauthorization. And I congratulate Chairman GORDON for such an important bill and for his distinguished service in Congress.

Mr. HALL of Texas. Madam Chairman, I reserve the balance of my time.

Mr. GORDON of Tennessee. Madam Chair, I yield 1½ minutes to the gentlelady from New York (Mrs. MALONEY), the chairman of the Joint Economic Committee.

Mrs. MALONEY. Madam Chair, I rise in support. This legislation will help to bolster our Nation's economic competitiveness by supporting basic research, the fundamental building block for innovation and making investments in science, technology, engineering, and math.

The Joint Economic Committee released a report this week looking at the role of basic research in the R&D process. The report highlights the critical role the Federal Government plays in funding basic research. While the Federal Government supports about one-quarter of overall R&D, as you can see on this chart, it funds more than half, 57 percent, of basic research. Without Federal involvement, basic research would be underfunded because the returns the private sector can gain on basic research are smaller than the broader benefits to our overall economy.

As we recover from the worst recession since the Great Depression, we have to look under every rock to give ourselves every chance of sparking innovations that will fuel future growth and jobs. The America COMPETES reauthorization funds the basic research that will drive a new generation of innovation, spawning new technologies and industries and leading to additional growth and jobs. America COMPETES will strengthen our economy by making strategic investments in America's future. I urge a ''yes'' vote and applaud the chairman of the committee for his many years of service.

Mr. HALL of Texas. Madam Chairman, I reserve the balance of my time.

Mr. GORDON of Tennessee. Madam Chairman, I yield 1½ minutes to the gentleman from New Mexico (Mr. LUJÁN), another valued member of our committee.

Mr. LUJÁN. Madam Chair, I rise today in support of the America COMPETES Reauthorization Act of 2010, and I thank Chairman GORDON and Ranking Member HALL for their work on this important bill and all my colleagues on the Committee on Science and Technology for their hard work.

During these difficult economic times, it's more important than ever to make sure the United States has the ability to compete globally. That's why this legislation is so sorely needed and which is why I included language in this bill that encourages cooperative agreements between small businesses and our national labs. Our national laboratories are developing new technology that could change the way we generate energy, keep our airports safer, and make our hospitals healthier. My language will make sure this technology gets into a competitive marketplace to encourage economic

development and create jobs right here in America.

The COMPETES Act also makes key investments in science education, ensuring that our students are prepared for the jobs of the future. For too long, there has been a divide that has kept minority students out of these fields. We must close this divide and make sure that this generation of students has the opportunity to be the next generation of scientists, researchers, and inventors. That is why I included language in this bill to help support Hispanic-Serving Institutions, Tribal Colleges and Universities, and other minority-serving institutions. The America COMPETES Act will drive innovation, support small business, increase American competitiveness, and create jobs. I urge my colleagues to support this bill.

□ 1545

Mr. HALL of Texas. Madam Chairman, I yield 5 minutes to the gentleman from California (Mr. BILBRAY).

Mr. BILBRAY. Madam Chairman, I regretfully stand up today in opposition to this bill, and it is not because of major portions of the bill. I want to say first of all, I want to thank the chairman for his effort here in getting as much of a bipartisan bill as possible. He worked hard on this, and not just this bill, but I think through the entire years he has been chair, he has really made an effort to do what a lot of people talk about in this town but very few are willing to do, and that is make that bipartisan effort.

Sadly, Madam Chair, I have to oppose this bill for one major issue, and that is this bill does not take the effort to make sure that the billions of dollars in this bill do not go to illegal employers who are creating a crime problem in my district and around this country. All we have asked for is the ability to assure our constituency that none of the tax money that we are putting into this bill at this effort will be diverted into illegal activities such as hiring people who are not legally present in the United States.

As every Member of Congress knows, the Federal Government requires that all Federal departments, including Members of Congress, use E-verification system to ensure or at least make the effort to avoid the situation where Federal tax dollars are being diverted into illegal employment.

The President of the United States this year initiated a program of requiring contractors to use the E-Verify system to make sure that those tax dollars didn't go to contractors who were illegally employing. All we asked with this bill was that we include a provision that allows us to be able to ensure our constituency that the same can be said with this expenditure of billions of dollars.

I have to say, I really feel remorse for having to stand up now because it has been such a great effort to try to get it across and do the right thing. All I can say, Madam Chair, is I hope the chairman, who knows how we feel about this, is successful in the future as this bill moves forward at including the provision for this in this bill that all employers, all contractors, all grantees, do the right thing and the appropriate thing by using E-Verify to make sure that Federal funds are not used in illegal activity.

So as we move forward, I would ask that the chairman's mark be looked at as an opportunity to include the E-Verify requirement; that when we go to conference, the E-Verify requirement be looked at as a possibility at that level; and before we go to final adoption, that we include the E-Verify in this, because I think after what has happened in the last few weeks, with the outrage across this country, both sides being very upset, the major thing they are upset about is that Congress is not taking the opportunity to do those little things that common sense and common decency say we should be doing as legislators and addressing the real source of the illegal immigration problem, and that is the illegal employment. And if we cannot find enough intestinal fortitude to require those who are getting Federal grants and Federal guarantees to play by the rules and make sure they are not hiring illegals, how can we go home to our constituency and say we really do care, let alone we've done enough.

I ask, Madam Chair, that we sadly vote against this bill, even with all of its great packages, until the essential part of this is done, and that is requiring that everybody who gets a loan guarantee, everybody who gets a grant, anybody who gives a job out under this bill needs to make sure that it is going to an American or a legal resident who has the right under the law to be employed in this country. Until we do that much, we really don't have the right to ask the American people to pay for this bill.

Mr. GORDON of Tennessee. Madam Chair, I yield 1 minute to the gentleman from Illinois (Mr. LIPINSKI) for a colloquy.

Mr. LIPINSKI. Madam Chair, section 404 of the bill reorganizes the NIST laboratories, including creating an engineering laboratory for manufacturing and construction research. As you are aware, NIST currently performs important research on fire safety. Will this restructuring of the current Building and Fire Research Lab prevent NIST from engaging in this important fire safety research?

Mr. GORDON of Tennessee. The gentleman is correct that NIST does perform critical research on fire safety, enabling safer fire codes and standards and safer equipment for firefighters. Nothing in this restructuring provision will prevent NIST from continuing this important work.

Mr. LIPINSKI. I thank Chairman GORDON.

Ms. HERSETH SANDLIN. Madam Chair, thank you for the opportunity to offer this amendment to the America COMPETES Act. I am grateful to Chairwoman SLAUGHTER and the Rules Committee for making this amendment in order.

I'd also like to thank Chairman GORDON for his support for this amendment and for his nearly 26 years of service in this Chamber. I congratulate him on his hard work on this bill and wish him and his family the best as he gets ready to move on to the next chapter in his career.

This amendment expresses the sense of the Congress that the National Science Foundation should respond to the recommendations of the National Academy of Sciences and National Science and Technology Council regarding investments in facilities, and to make joint investments with the Department of Energy where possible.

Currently, the NSF in investing in one such project with the Department of Energy for a joint facility in South Dakota, in response to the recommendations of the National Academy of Sciences and National Science and Technology Council.

The facility in Lead, South Dakota is known as the Deep Underground Science and Engineering Laboratory, or DUSEL. A deep underground facility will shield experiments from cosmic rays that interfere with results. The DUSEL in Lead will be the largest deep underground facility in the world; Russia, Italy, and Japan already have deep underground facilities.

Lead is the home of the Homestake gold mine, once the largest and deepest gold mine in North America. The DUSEL will continue a long history of scientific exploration in the Homestake mine, which began with the solar neutrino experiments of the 1960s.

Construction is already underway at the mine to accommodate this new 21st century scientific project of national significance. Preparations for a Large Underground Xenon, or LUX, detector are already occurring 4,850 feet below the surface. The mission of the LUX detector is to detect dark matter which makes up approximately 95 percent of mass in the known universe. This experiment will help us better understand the makeup of the universe.

The DUSEL project promises to advance our understanding in a number of scientific disciplines, including particle and nuclear physics, geology, hydrology, geo-engineering, biology, and biochemistry. Experiments in the mine will be conducted at the surface and up to 8,000 feet deep. It will also have an important educational component for K–12 students all the way through graduate school students. Educating our girls and boys at a younger age in science will help them achieve as they get older and encourage them to pursue scientific careers.

I am grateful for Chairman GORDON's support for this amendment and urge my colleagues to approve this amendment and help advance the cause of science and continue our Nation's leading role in exploring the foundations of the natural world around us.

Mr. GRIJALVA. Madam Chair, I want to express my support of the America COMPETES Act, and in its commitment to investing in quality math and science education. Strong investments in STEM fields are essential to the future success of our nation, both in our commitment to quality education and America's continued leadership in science throughout the world.

I particularly rise in strong support of the Davis Amendment for which I am a cosponsor; an amendment that envisions the increasingly important role that community colleges can and should play in the advancement of STEM education and STEM career training.

Community colleges are an affordable and accessible educational vehicle. They provide high quality education and career training ro a diverse population of students and serve the diverse needs of their communities.

I strongly support the plan to build partnerships and grants to community colleges to improve educational opportunities for underserved communities, and to explore and expand the role of community colleges in STEM fields.

This amendment will assist community colleges by exploring the role of two-year institutions of higher education as STEM educators, providers of the foundational elements for people on the path to STEM careers and transitioning to four-year instititions in STEM degree programs.

The amendment will further task Federal agencies with engaging underrepresented groups in STEM and in engaging community colleges on opportunities to participate in STEM related research, curriculum and infrastructure.

I thank Congressman DANNY DAVIS for his leadership and am happy to join him on this amendment.

Ms. HIRONO. Madam Chair, I rise in strong support of H.R. 5116, the America COMPETES Reauthorization Act.

Three years ago, Congress passed the America Creating Opportunities to Meaningfully Promote Excellence in Technology Education and Science Act, or America COMPETES Act. Enactment of this law authorized funds over three years for the National Science Foundation, the National Institute of Standards and Technology, and certain math and science related programs within the Energy Department's Office of Science.

The 2007 law came about partly in reaction to a 2005 National Academies report that focused on American students' lagging performance in science and math compared with their peers in other developed countries. In passing this law, we realize then, as we do now, that failure to invest in our young people by improving science, technology, engineering, and math (STEM) education at all levels will have serious repercussions—not only in terms of workforce development but also in our ability to promote cutting-edge, innovative breakthroughs that will keep us competitive in the global economy.

As a cosponsor of H.R. 5116, I believe that America's economy can continue to grow and prosper if we act now to promote innovation and the development of new technology. This bill expands, strengthens, and aligns STEM education programs at all levels. It allows more schools to participate in the Robert Noyce Teacher Scholarship program, which trains highly competent secondary teachers in STEM fields to teach in high-need schools. It provides grants to increase the quantity and quality of students receiving undergraduate degrees in STEM and creates fellowships to develop the leadership skills of recent doctoral degree graduates in these fields. Importantly, H.R. 5116 promotes participation of women and minorities in STEM fields to strengthen and diversify our workforce.

The America COMPETES Reauthorization Act also creates a new program that provides loan guarantees to small- and medium-sized manufacturers for projects using innovative technologies or processes. In addition, this bill fosters innovation and basic research by supporting new regional innovation clusters, creating energy innovation hubs, and reauthorizing ARPA–E (the Advanced Research Projects Agency for Energy) to pursue high-risk, high-reward technology development.

Our nation has flourished from the dreams of pioneers who have turned innovative ideas into breakthrough technologies. Investing in STEM education, workforce development, and R&D will help spur economic growth and provide quality jobs for Americans in the 21st century.

I urge my colleagues to support this measure.

Mr. HALL of Texas. Madam Chairman, we have no further speakers, and I yield back the balance of my time.

Mr. GORDON of Tennessee. I yield back the balance of my time.

The CHAIR. All time for general debate has expired.

Pursuant to the rule, the bill shall be considered for amendment under the 5-minute rule.

It shall be in order to consider as an original bill for the purpose of amendment under the 5-minute rule the amendment in the nature of a substitute printed in the bill, modified by the amendment printed in part A of House Report 111–479. The committee amendment in the nature of a substitute shall be considered as read.

The text of the committee amendment in the nature of a substitute is as follows:

H.R. 5116

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the ''America COMPETES Reauthorization Act of 2010''.

(b) TABLE OF CONTENTS.—The table of contents for this Act is as follows:

Sec. 1. Short title; table of contents.

TITLE I—SCIENCE AND TECHNOLOGY POLICY

Subtitle A—National Nanotechnology Initiative Amendments

Sec. 101. Short title.
Sec. 102. National nanotechnology program amendments.
Sec. 103. Societal dimensions of nanotechnology.
Sec. 104. Technology transfer.
Sec. 105. Research in areas of national importance.
Sec. 106. Nanomanufacturing research.
Sec. 107. Definitions.

Subtitle B—Networking and Information Technology Research and Development

Sec. 111. Short title.
Sec. 112. Program planning and coordination.
Sec. 113. Large-scale research in areas of national importance.
Sec. 114. Cyber-physical systems and information management.
Sec. 115. National Coordination Office.
Sec. 116. Improving networking and information technology education.
Sec. 117. Conforming and technical amendments.

Subtitle C—Other OSTP Provisions

Sec. 121. Federal scientific collections.
Sec. 122. Coordination of manufacturing research and development.
Sec. 123. Interagency public access committee.
Sec. 124. Fulfilling the potential of women in academic science and engineering.

TITLE II—NATIONAL SCIENCE FOUNDATION

Sec. 201. Short title.

Subtitle A—General Provisions

Sec. 211. Definitions.
Sec. 212. Authorization of appropriations.
Sec. 213. National Science Board administrative amendments.
Sec. 214. Broader impacts review criterion.
Sec. 215. National Center for Science and Engineering Statistics.
Sec. 216. Collection of data on demographics of faculty.

Subtitle B—Research and Innovation

Sec. 221. Support for potentially transformative research.
Sec. 222. Facilitating interdisciplinary collaborations for national needs.
Sec. 223. National Science Foundation manufacturing research and education.
Sec. 224. Strengthening institutional research partnerships.
Sec. 225. National Science Board report on mid-scale instrumentation.
Sec. 226. Sense of Congress on overall support for research infrastructure at the Foundation.
Sec. 227. Partnerships for innovation.
Sec. 228. Prize awards.

Subtitle C—STEM Education and Workforce Training

Sec. 241. Graduate student support.
Sec. 242. Postdoctoral fellowship in STEM education research.
Sec. 243. Robert Noyce teacher scholarship program.
Sec. 244. Institutions serving persons with disabilities.
Sec. 245. Institutional integration.
Sec. 246. Postdoctoral research fellowships.
Sec. 247. Broadening participation training and outreach.
Sec. 248. Transforming undergraduate education in STEM.
Sec. 249. 21st century graduate education.
Sec. 250. Undergraduate broadening participation program.
Sec. 251. Grand challenges in education research.
Sec. 252. Research experiences for undergraduates.
Sec. 253. Laboratory science pilot program.
Sec. 254. STEM industry internship programs.
Sec. 255. Tribal colleges and universities program.

TITLE III—STEM EDUCATION

Sec. 301. Coordination of Federal STEM education.
Sec. 302. Advisory committee on STEM education.
Sec. 303. STEM education at the Department of Energy.
Sec. 304. Green energy education.

TITLE IV—NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

Sec. 401. Short title.
Sec. 402. Authorization of appropriations.
Sec. 403. Under Secretary of Commerce for Standards and Technology.
Sec. 404. Reorganization of NIST laboratories.
Sec. 405. Federal Government standards and conformity assessment coordination.
Sec. 406. Manufacturing extension partnership.
Sec. 407. Bioscience research program.
Sec. 408. Emergency communication and tracking technologies research initiative.

Sec. 409. TIP Advisory Board.
Sec. 410. Underrepresented minorities.
Sec. 411. Cyber security standards and guidelines.
Sec. 412. Definitions.

TITLE V—INNOVATION

Sec. 501. Office of Innovation and Entrepreneurship.
Sec. 502. Federal loan guarantees for innovative technologies in manufacturing.
Sec. 503. Regional innovation program.

TITLE VI—DEPARTMENT OF ENERGY

Subtitle A—Office of Science

Sec. 601. Short title.
Sec. 602. Definitions.
Sec. 603. Mission of the Office of Science.
Sec. 604. Basic Energy Sciences Program.
Sec. 605. Biological and Environmental Research Program.
Sec. 606. Advanced Scientific Computing Research Program.
Sec. 607. Fusion energy research program.
Sec. 608. High Energy Physics Program.
Sec. 609. Nuclear Physics Program.
Sec. 610. Science Laboratories Infrastructure Program.
Sec. 611. Authorization of appropriations.

Subtitle B—Advanced Research Projects Agency-Energy

Sec. 621. Short title.
Sec. 622. ARPA-E amendments.

Subtitle C—Energy Innovation Hubs

Sec. 631. Short title.
Sec. 632. Energy Innovation Hubs.

Subtitle D—Cooperative Research and Development Fund

Sec. 641. Short title.
Sec. 642. Cooperative research and development fund.

TITLE VII—MISCELLANEOUS

Sec. 701. Sense of Congress.
Sec. 702. Persons with disabilities.
Sec. 703. Veterans and service members.

TITLE I—SCIENCE AND TECHNOLOGY POLICY

Subtitle A—National Nanotechnology Initiative Amendments

SEC. 101. SHORT TITLE.

This subtitle may be cited as the ''National Nanotechnology Initiative Amendments Act of 2010''.

SEC. 102. NATIONAL NANOTECHNOLOGY PROGRAM AMENDMENTS.

The 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7501 et seq.) is amended—

(1) by striking section 2(c)(4) and inserting the following new paragraph:

''(4) develop, within 12 months after the date of enactment of the National Nanotechnology Initiative Amendments Act of 2010, and update every 3 years thereafter, a strategic plan to guide the activities described under subsection (b) that specifies near-term and long-term objectives for the Program, the anticipated time frame for achieving the near-term objectives, and the metrics to be used for assessing progress toward the objectives, and that describes—

''(A) how the Program will move results out of the laboratory and into applications for the benefit of society, including through cooperation and collaborations with nanotechnology research, development, and technology transition initiatives supported by the States;

''(B) how the Program will encourage and support interdisciplinary research and development in nanotechnology; and

''(C) proposed research in areas of national importance in accordance with the requirements of section 105 of the National Nanotechnology Initiative Amendments Act of 2010;'';

(2) in section 2—

(A) in subsection (d)—

(i) by redesignating paragraphs (1) through (5) as paragraphs (2) through (6), respectively; and

(ii) by inserting the following new paragraph before paragraph (2), as so redesignated by clause (i) of this subparagraph:

''(1) the Program budget, for the previous fiscal year, for each agency that participates in the Program, including a breakout of spending for the development and acquisition of research facilities and instrumentation, for each program component area, and for all activities pursuant to subsection (b)(10);''; and

(B) by inserting at the end the following new subsection:

''(e) STANDARDS SETTING.—The agencies participating in the Program shall support the activities of committees involved in the development of standards for nanotechnology and may reimburse the travel costs of scientists and engineers who participate in activities of such committees.'';

(3) by striking section 3(b) and inserting the following new subsection:

''(b) FUNDING.—(1) The operation of the National Nanotechnology Coordination Office shall be supported by funds from each agency participating in the Program. The portion of such Office's total budget provided by each agency for each fiscal year shall be in the same proportion as the agency's share of the total budget for the Program for the previous fiscal year, as specified in the report required under section 2(d)(1).

''(2) The annual report under section 2(d) shall include—

''(A) a description of the funding required by the National Nanotechnology Coordination Office to perform the functions specified under subsection (a) for the next fiscal year by category of activity, including the funding required to carry out the requirements of section 2(b)(10)(D), subsection (d) of this section, and section 5;

''(B) a description of the funding required by such Office to perform the functions specified under subsection (a) for the current fiscal year by category of activity, including the funding required to carry out the requirements of subsection (d); and

''(C) the amount of funding provided for such Office for the current fiscal year by each agency participating in the Program.'';

(4) by inserting at the end of section 3 the following new subsection:

''(d) PUBLIC INFORMATION.—(1) The National Nanotechnology Coordination Office shall develop and maintain a database accessible by the public of projects funded under the Environmental, Health, and Safety, the Education and Societal Dimensions, and the Nanomanufacturing program component areas, or any successor program component areas, including a description of each project, its source of funding by agency, and its funding history. For the Environmental, Health, and Safety program component area, or any successor program component area, projects shall be grouped by major objective as defined by the research plan required under section 103(b) of the National Nanotechnology Initiative Amendments Act of 2010. For the Education and Societal Dimensions program component area, or any successor program component area, the projects shall be grouped in subcategories of—

''(A) education in formal settings;

''(B) education in informal settings;

''(C) public outreach; and

''(D) ethical, legal, and other societal issues.

''(2) The National Nanotechnology Coordination Office shall develop, maintain, and publicize information on nanotechnology facilities supported under the Program, and may include information on nanotechnology facilities supported by the States, that are accessible for use by individuals from academic institutions and from industry. The information shall include at a minimum the terms and conditions for the use of each facility, a description of the capabilities of the instruments and equipment available for use at the facility, and a description of the technical support available to assist users of the facility.'';

(5) in section 4(a)—

(A) by striking ''or designate'';

(B) by inserting ''as a distinct entity'' after ''Advisory Panel''; and

(C) by inserting at the end ''The Advisory Panel shall form a subpanel with membership having specific qualifications tailored to enable it to carry out the requirements of subsection (c)(7).'';

(6) in section 4(b)—

(A) by striking ''or designated'' and ''or designating''; and

(B) by adding at the end the following: ''At least one member of the Advisory Panel shall be an individual employed by and representing a minority-serving institution.'';

(7) by amending section 5 to read as follows:

''SEC. 5. TRIENNIAL EXTERNAL REVIEW OF THE NATIONAL NANOTECHNOLOGY PROGRAM.

''(a) IN GENERAL.—The Director of the National Nanotechnology Coordination Office shall enter into an arrangement with the National Research Council of the National Academy of Sciences to conduct a triennial review of the Program. The Director shall ensure that the arrangement with the National Research Council is concluded in order to allow sufficient time for the reporting requirements of subsection (b) to be satisfied. Each triennial review shall include an evaluation of the—

''(1) research priorities and technical content of the Program, including whether the allocation of funding among program component areas, as designated according to section 2(c)(2), is appropriate;

''(2) effectiveness of the Program's management and coordination across agencies and disciplines, including an assessment of the effectiveness of the National Nanotechnology Coordination Office;

''(3) Program's scientific and technological accomplishments and its success in transferring technology to the private sector; and

''(4) adequacy of the Program's activities addressing ethical, legal, environmental, and other appropriate societal concerns, including human health concerns.

''(b) EVALUATION TO BE TRANSMITTED TO CONGRESS.—The National Research Council shall document the results of each triennial review carried out in accordance with subsection (a) in a report that includes any recommendations for ways to improve the Program's management and coordination processes and for changes to the Program's objectives, funding priorities, and technical content. Each report shall be submitted to the Director of the National Nanotechnology Coordination Office, who shall transmit it to the Advisory Panel, the Committee on Commerce, Science, and Transportation of the Senate, and the Committee on Science and Technology of the House of Representatives not later than September 30 of every third year, with the first report due September 30, 2010.

''(c) FUNDING.—Of the amounts provided in accordance with section 3(b)(1), the following amounts shall be available to carry out this section:

''(1) $500,000 for fiscal year 2010.

''(2) $500,000 for fiscal year 2011.

''(3) $500,000 for fiscal year 2012.''; and

(8) in section 10—

(A) by amending paragraph (2) to read as follows:

''(2) NANOTECHNOLOGY.—The term 'nanotechnology' means the science and technology that will enable one to understand, measure, manipulate, and manufacture at the nanoscale, aimed at creating materials, devices, and systems with fundamentally new properties or functions.''; and

(B) by adding at the end the following new paragraph:

''(7) NANOSCALE.—The term 'nanoscale' means one or more dimensions of between approximately 1 and 100 nanometers.''.

SEC. 103. SOCIETAL DIMENSIONS OF NANOTECHNOLOGY.

(a) COORDINATOR FOR SOCIETAL DIMENSIONS OF NANOTECHNOLOGY.—The Director of the Office of Science and Technology Policy shall designate an associate director of the Office of Science and Technology Policy as the Coordinator for Societal Dimensions of Nanotechnology. The Coordinator shall be responsible for oversight of the coordination, planning, and budget prioritization of activities required by section 2(b)(10) of the 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7501(b)(10)). The Coordinator shall, with the assistance of appropriate senior officials of the agencies funding activities within the Environmental, Health, and Safety and the Education and Societal Dimensions program component areas of the Program, or any successor program component areas, ensure that the requirements of such section 2(b)(10) are satisfied. The responsibilities of the Coordinator shall include—

(1) ensuring that a research plan for the environmental, health, and safety research activities required under subsection (b) is developed, updated, and implemented and that the plan is responsive to the recommendations of the subpanel of the Advisory Panel established under section 4(a) of the 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7503(a)), as amended by this subtitle;

(2) encouraging and monitoring the efforts of the agencies participating in the Program to allocate the level of resources and management attention necessary to ensure that the ethical, legal, environmental, and other appropriate societal concerns related to nanotechnology, including human health concerns, are addressed under the Program, including the implementation of the research plan described in subsection (b); and

(3) encouraging the agencies required to develop the research plan under subsection (b) to identify, assess, and implement suitable mechanisms for the establishment of public-private partnerships for support of environmental, health, and safety research.

(b) RESEARCH PLAN.—

(1) IN GENERAL.—The Coordinator for Societal Dimensions of Nanotechnology shall convene and chair a panel comprised of representatives from the agencies funding research activities under the Environmental, Health, and Safety program component area of the Program, or any successor program component area, and from such other agencies as the Coordinator considers necessary to develop, periodically update, and coordinate the implementation of a research plan for this program component area. In developing and updating the plan, the panel convened by the Coordinator shall solicit and be responsive to recommendations and advice from—

(A) the subpanel of the Advisory Panel established under section 4(a) of the 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7503(a)), as amended by this subtitle; and

(B) the agencies responsible for environmental, health, and safety regulations associated with the production, use, and disposal of nanoscale materials and products.

(2) DEVELOPMENT OF STANDARDS.—The plan required under paragraph (1) shall include a description of how the Program will help to ensure the development of—

(A) standards related to nomenclature associated with engineered nanoscale materials;

(B) engineered nanoscale standard reference materials for environmental, health, and safety testing; and

(C) standards related to methods and procedures for detecting, measuring, monitoring, sampling, and testing engineered nanoscale materials for environmental, health, and safety impacts.

(3) COMPONENTS OF PLAN.—The plan required under paragraph (1) shall, with respect to activities described in paragraphs (1) and (2)—

(A) specify near-term research objectives and long-term research objectives;

(B) specify milestones associated with each near-term objective and the estimated time and resources required to reach each milestone;

(C) with respect to subparagraphs (A) and (B), describe the role of each agency carrying out or sponsoring research in order to meet the objectives specified under subparagraph (A) and to achieve the milestones specified under subparagraph (B);

(D) specify the funding allocated to each major objective of the plan and the source of funding by agency for the current fiscal year; and

(E) estimate the funding required for each major objective of the plan and the source of funding by agency for the following 3 fiscal years.

(4) TRANSMITTAL TO CONGRESS.—The plan required under paragraph (1) shall be submitted not later than 60 days after the date of enactment of this Act to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science and Technology of the House of Representatives.

(5) UPDATING AND APPENDING TO REPORT.—The plan required under paragraph (1) shall be updated annually and appended to the report required under section 2(d) of the 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7501(d)).

(c) NANOTECHNOLOGY PARTNERSHIPS.—

(1) ESTABLISHMENT.—As part of the program authorized by section 9 of the National Science Foundation Authorization Act of 2002, the Director of the National Science Foundation shall provide 1 or more grants to establish partnerships as defined by subsection (a)(2) of that section, except that each such partnership shall include 1 or more businesses engaged in the production of nanoscale materials, products, or devices. Partnerships established in accordance with this subsection shall be designated as ''Nanotechnology Education Partnerships''.

(2) PURPOSE.—Nanotechnology Education Partnerships shall be designed to recruit and help prepare secondary school students to pursue postsecondary level courses of instruction in nanotechnology. At a minimum, grants shall be used to support—

(A) professional development activities to enable secondary school teachers to use curricular materials incorporating nanotechnology and to inform teachers about career possibilities for students in nanotechnology;

(B) enrichment programs for students, including access to nanotechnology facilities and equipment at partner institutions, to increase their understanding of nanoscale science and technology and to inform them about career possibilities in nanotechnology as scientists, engineers, and technicians; and

(C) identification of appropriate nanotechnology educational materials and incorporation of nanotechnology into the curriculum for secondary school students at one or more organizations participating in a Partnership.

(3) SELECTION.—Grants under this subsection shall be awarded in accordance with subsection (b) of such section 9, except that paragraph (3)(B) of that subsection shall not apply.

(d) UNDERGRADUATE EDUCATION PROGRAMS.—

(1) ACTIVITIES SUPPORTED.—As part of the activities included under the Education and Societal Dimensions program component area, or any successor program component area, the Program shall support efforts to introduce nanoscale science, engineering, and technology into undergraduate science and engineering education through a variety of interdisciplinary approaches. Activities supported may include—

(A) development of courses of instruction or modules to existing courses;

(B) faculty professional development; and

(C) acquisition of equipment and instrumentation suitable for undergraduate education and research in nanotechnology.

(2) COURSE, CURRICULUM, AND LABORATORY IMPROVEMENT AUTHORIZATION.—There are authorized to be appropriated to the Director of the National Science Foundation to carry out activities described in paragraph (1) through the Course, Curriculum, and Laboratory Improvement program from amounts authorized under section 7002(c)(2)(B) of the America COMPETES Act, $5,000,000 for fiscal year 2010.

(3) ADVANCED TECHNOLOGY EDUCATION AUTHORIZATION.—There are authorized to be appropriated to the Director of the National Science Foundation to carry out activities described in paragraph (1) through the Advanced Technology Education program from amounts authorized under section 7002(c)(2)(B) of the America COMPETES Act, $5,000,000 for fiscal year 2010.

(e) INTERAGENCY WORKING GROUP.—The National Science and Technology Council shall establish under the Nanoscale Science, Engineering, and Technology Subcommittee an Education Working Group to coordinate, prioritize, and plan the educational activities supported under the Program.

(f) SOCIETAL DIMENSIONS IN NANOTECHNOLOGY EDUCATION ACTIVITIES.—Activities supported under the Education and Societal Dimensions program component area, or any successor program component area, that involve informal, precollege, or undergraduate nanotechnology education shall include education regarding the environmental, health and safety, and other societal aspects of nanotechnology.

(g) REMOTE ACCESS TO NANOTECHNOLOGY FACILITIES.—(1) Agencies supporting nanotechnology research facilities as part of the Program shall require the entities that operate such facilities to allow access via the Internet, and support the costs associated with the provision of such access, by secondary school students and teachers, to instruments and equipment within such facilities for educational purposes. The agencies may waive this requirement for cases when particular facilities would be inappropriate for educational purposes or the costs for providing such access would be prohibitive.

(2) The agencies identified in paragraph (1) shall require the entities that operate such nanotechnology research facilities to establish and publish procedures, guidelines, and conditions for the submission and approval of applications for the use of the facilities for the purpose identified in paragraph (1) and shall authorize personnel who operate the facilities to provide necessary technical support to students and teachers.

SEC. 104. TECHNOLOGY TRANSFER.

(a) PROTOTYPING.—

(1) ACCESS TO FACILITIES.—In accordance with section 2(b)(7) of 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7501(b)(7)), the agencies supporting nanotechnology research facilities as part of the Program shall provide access to such facilities to companies for the purpose of assisting the companies in the development of prototypes of nanoscale products, devices, or processes (or products, devices, or processes enabled by nanotechnology) for determining proof of concept. The agencies shall publicize the availability of these facilities and encourage their use by companies as provided for in this section.

(2) PROCEDURES.—The agencies identified in paragraph (1)—

(A) shall establish and publish procedures, guidelines, and conditions for the submission and approval of applications for use of nanotechnology facilities;

(B) shall publish descriptions of the capabilities of facilities available for use under this subsection, including the availability of technical support; and

(C) may waive recovery, require full recovery, or require partial recovery of the costs associated with use of the facilities for projects under this subsection.

(3) SELECTION AND CRITERIA.—In cases when less than full cost recovery is required pursuant to paragraph (2)(C), projects provided access to nanotechnology facilities in accordance with this subsection shall be selected through a competitive, merit-based process, and the criteria for the selection of such projects shall include at a minimum—

(A) the readiness of the project for technology demonstration;

(B) evidence of a commitment by the applicant for further development of the project to full commercialization if the proof of concept is established by the prototype; and

(C) evidence of the potential for further funding from private sector sources following the successful demonstration of proof of concept.

The agencies may give special consideration in selecting projects to applications that are relevant to important national needs or requirements.

(b) USE OF EXISTING TECHNOLOGY TRANSFER PROGRAMS.—

(1) PARTICIPATING AGENCIES.—Each agency participating in the Program shall—

(A) encourage the submission of applications for support of nanotechnology related projects to the Small Business Innovation Research Program and the Small Business Technology Transfer Program administered by such agencies; and

(B) through the National Nanotechnology Coordination Office and within 6 months after the date of enactment of this Act, submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science and Technology of the House of Representatives—

(i) the plan described in section 2(c)(7) of the 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7501(c)(7)); and

(ii) a report specifying, if the agency administers a Small Business Innovation Research Program and a Small Business Technology Transfer Program—

(I) the number of proposals received for nanotechnology related projects during the current fiscal year and the previous 2 fiscal years;

(II) the number of such proposals funded in each year;

(III) the total number of nanotechnology related projects funded and the amount of funding provided for fiscal year 2004 through fiscal year 2008; and

(IV) a description of the projects identified in accordance with subclause (III) which received private sector funding beyond the period of phase II support.

(2) NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.—The Director of the National Institute of Standards and Technology in carrying out the requirements of section 28 of the National Institute of Standards and Technology Act (15 U.S.C. 278n) shall—

(A) in regard to subsection (d) of that section, encourage the submission of proposals for support of nanotechnology related projects; and

(B) in regard to subsection (g) of that section, include a description of how the requirement of subparagraph (A) of this paragraph is being met, the number of proposals for nanotechnology related projects received, the number of such proposals funded, the total number of such projects funded since the beginning of the Technology Innovation Program, and the outcomes of such funded projects in terms of the metrics developed in accordance with such subsection (g).

(3) TIP ADVISORY BOARD.—The TIP Advisory Board established under section 28(k) of the National Institute of Standards and Technology Act (15 U.S.C. 278n(k)), in carrying out its responsibilities under subsection (k)(3), shall provide the Director of the National Institute of Standards and Technology with—

(A) advice on how to accomplish the requirement of paragraph (2)(A) of this subsection; and

(B) an assessment of the adequacy of the allocation of resources for nanotechnology related projects supported under the Technology Innovation Program.

(c) INDUSTRY LIAISON GROUPS.—An objective of the Program shall be to establish industry liaison groups for all industry sectors that would benefit from applications of nanotechnology. The Nanomanufacturing, Industry Liaison, and Innovation Working Group of the National Science and Technology Council shall actively pursue establishing such liaison groups.

(d) COORDINATION WITH STATE INITIATIVES.—Section 2(b)(5) of the 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7501(b)(5)) is amended to read as follows:

''(5) ensuring United States global leadership in the development and application of nanotechnology, including through coordination and leveraging Federal investments with nanotechnology research, development, and technology transition initiatives supported by the States;''.

SEC. 105. RESEARCH IN AREAS OF NATIONAL IMPORTANCE.

(a) IN GENERAL.—The Program shall include support for nanotechnology research and development activities directed toward application areas that have the potential for significant contributions to national economic competitiveness and for other significant societal benefits. The activities supported shall be designed to advance the development of research discoveries by demonstrating technical solutions to important problems in such areas as nano-electronics, energy efficiency, health care, and water remediation and purification. The Advisory Panel shall make recommendations to the Program for candidate research and development areas for support under this section.

(b) CHARACTERISTICS.—

(1) IN GENERAL.—Research and development activities under this section shall—

(A) include projects selected on the basis of applications for support through a competitive, merit-based process;

(B) involve collaborations among researchers in academic institutions and industry, and may involve nonprofit research institutions and Federal laboratories, as appropriate;

(C) when possible, leverage Federal investments through collaboration with related State initiatives; and

(D) include a plan for fostering the transfer of research discoveries and the results of technology demonstration activities to industry for commercial development.

(2) PROCEDURES.—Determination of the requirements for applications under this subsection, review and selection of applications for support, and subsequent funding of projects shall be carried out by a collaboration of no fewer than 2 agencies participating in the Program. In selecting applications for support, the agencies shall give special consideration to projects that include cost sharing from non-Federal sources.

(3) INTERDISCIPLINARY RESEARCH CENTERS.—Research and development activities under this section may be supported through interdisciplinary nanotechnology research centers, as authorized by section 2(b)(4) of the 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7501(b)(4)), that are organized to investigate basic research questions and carry out technology demonstration activities in areas such as those identified in subsection (a).

(c) REPORT.—Reports required under section 2(d) of the 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7501(d)) shall include a description of research and development areas supported in accordance with this section, including the same budget information as is required for program component areas under paragraphs (1) and (2) of such section 2(d).

SEC. 106. NANOMANUFACTURING RESEARCH.

(a) RESEARCH AREAS.—The Nanomanufacturing program component area, or any successor program component area, shall include research on—

(1) development of instrumentation and tools required for the rapid characterization of nanoscale materials and for monitoring of nanoscale manufacturing processes; and

(2) approaches and techniques for scaling the synthesis of new nanoscale materials to achieve industrial-level production rates.

(b) GREEN NANOTECHNOLOGY.—Interdisciplinary research centers supported under the Program in accordance with section 2(b)(4) of the 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7501(b)(4)) that are focused on nanomanufacturing research and centers established under the authority of section 105(b)(3) of this subtitle shall include as part of the activities of such centers—

(1) research on methods and approaches to develop environmentally benign nanoscale products and nanoscale manufacturing processes, taking into consideration relevant findings and results of research supported under the Environmental, Health, and Safety program component area, or any successor program component area;

(2) fostering the transfer of the results of such research to industry; and

(3) providing for the education of scientists and engineers through interdisciplinary studies in the principles and techniques for the design and development of environmentally benign nanoscale products and processes.

(c) REVIEW OF NANOMANUFACTURING RESEARCH AND RESEARCH FACILITIES.—

(1) PUBLIC MEETING.—Not later than 12 months after the date of enactment of this Act, the National Nanotechnology Coordination Office shall sponsor a public meeting, including representation from a wide range of industries engaged in nanoscale manufacturing, to—

(A) obtain the views of participants at the meeting on—

(i) the relevance and value of the research being carried out under the Nanomanufacturing program component area of the Program, or any successor program component area; and

(ii) whether the capabilities of nanotechnology research facilities supported under the Program are adequate—

(I) to meet current and near-term requirements for the fabrication and characterization of nanoscale devices and systems; and

(II) to provide access to and use of instrumentation and equipment at the facilities, by means of networking technology, to individuals who are at locations remote from the facilities; and

(B) receive any recommendations on ways to strengthen the research portfolio supported under the Nanomanufacturing program component area, or any successor program component area, and on improving the capabilities of nanotechnology research facilities supported under the Program.

Companies participating in industry liaison groups shall be invited to participate in the meeting. The Coordination Office shall prepare a report documenting the findings and recommendations resulting from the meeting.

(2) ADVISORY PANEL REVIEW.—The Advisory Panel shall review the Nanomanufacturing program component area of the Program, or any successor program component area, and the capabilities of nanotechnology research facilities supported under the Program to assess—

(A) whether the funding for the Nanomanufacturing program component area, or any successor program component area, is adequate and receiving appropriate priority within the overall resources available for the Program;

(B) the relevance of the research being supported to the identified needs and requirements of industry;

(C) whether the capabilities of nanotechnology research facilities supported under the Program are adequate—

(i) to meet current and near-term requirements for the fabrication and characterization of nanoscale devices and systems; and

(ii) to provide access to and use of instrumentation and equipment at the facilities, by means of networking technology, to individuals who are at locations remote from the facilities; and

(D) the level of funding that would be needed to support—

(i) the acquisition of instrumentation, equipment, and networking technology sufficient to provide the capabilities at nanotechnology research facilities described in subparagraph (C); and

(ii) the operation and maintenance of such facilities.

In carrying out its assessment, the Advisory Panel shall take into consideration the findings and recommendations from the report required under paragraph (1).

(3) REPORT.—Not later than 18 months after the date of enactment of this Act, the Advisory Panel shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science and Technology of the House of Representatives a report on its assessment required under paragraph (2), along with any recommendations and a copy of the report prepared in accordance with paragraph (1).

SEC. 107. DEFINITIONS.

In this subtitle, terms that are defined in section 10 of the 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7509) have the meaning given those terms in that section.

Subtitle B—Networking and Information Technology Research and Development

SEC. 111. SHORT TITLE.

This subtitle may be cited as the ''Networking and Information Technology Research and Development Act of 2010''.

SEC. 112. PROGRAM PLANNING AND COORDINATION.

(a) PERIODIC REVIEWS.—Section 101 of the High-Performance Computing Act of 1991 (15 U.S.C. 5511) is amended by adding at the end the following new subsection:

''(d) PERIODIC REVIEWS.—The agencies identified in subsection (a)(3)(B) shall—

''(1) periodically assess the contents and funding levels of the Program Component Areas and restructure the Program when warranted, taking into consideration any relevant recommendations of the advisory committee established under subsection (b); and

''(2) ensure that the Program includes large-scale, long-term, interdisciplinary research and development activities, including activities described in section 104.''.

(b) DEVELOPMENT OF STRATEGIC PLAN.—Section 101 of such Act (15 U.S.C. 5511) is amended further by adding after subsection (d), as added by subsection (a) of this section, the following new subsection:

''(e) STRATEGIC PLAN.—

''(1) IN GENERAL.—The agencies identified in subsection (a)(3)(B), working through the National Science and Technology Council and with the assistance of the National Coordination Office established under section 102, shall develop, within 12 months after the date of enactment of the Networking and Information Technology Research and Development Act of 2010, and update every 3 years thereafter, a 5-year strategic plan to guide the activities described under subsection (a)(1).

''(2) CONTENTS.—The strategic plan shall specify near-term and long-term objectives for the Program, the anticipated time frame for achieving the near-term objectives, the metrics to be used for assessing progress toward the objectives, and how the Program will—

''(A) foster the transfer of research and development results into new technologies and applications for the benefit of society, including through cooperation and collaborations with networking and information technology research, development, and technology transition initiatives supported by the States;

''(B) encourage and support mechanisms for interdisciplinary research and development in networking and information technology, including through collaborations across agencies, across Program Component Areas, with industry, with Federal laboratories (as defined in section 4 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3703)), and with international organizations;

''(C) address long-term challenges of national importance for which solutions require large-scale, long-term, interdisciplinary research and development;

''(D) place emphasis on innovative and high-risk projects having the potential for substantial societal returns on the research investment;

''(E) strengthen all levels of networking and information technology education and training programs to ensure an adequate, well-trained workforce; and

''(F) attract more women and underrepresented minorities to pursue postsecondary degrees in networking and information technology.

''(3) NATIONAL RESEARCH INFRASTRUCTURE.—The strategic plan developed in accordance with paragraph (1) shall be accompanied by milestones and roadmaps for establishing and maintaining the national research infrastructure required to support the Program, including the roadmap required by subsection (a)(2)(E).

''(4) RECOMMENDATIONS.—The entities involved in developing the strategic plan under paragraph (1) shall take into consideration the recommendations—

''(A) of the advisory committee established under subsection (b); and

''(B) of the stakeholders whose input was solicited by the National Coordination Office, as required under section 102(b)(3).

''(5) REPORT TO CONGRESS.—The Director of the National Coordination Office shall transmit the strategic plan required under paragraph (1) to the advisory committee, the Committee on Commerce, Science, and Transportation of the Senate, and the Committee on Science and Technology of the House of Representatives.''.

(c) ADDITIONAL RESPONSIBILITIES OF DIRECTOR.—Section 101(a)(2) of such Act (15 U.S.C. 5511(a)(2)) is amended—

(1) by redesignating subparagraphs (E) and (F) as subparagraphs (F) and (G), respectively; and

(2) by inserting after subparagraph (D) the following new subparagraph:

''(E) encourage and monitor the efforts of the agencies participating in the Program to allocate the level of resources and management attention necessary to ensure that the strategic plan under subsection (e) is developed and executed effectively and that the objectives of the Program are met;''.

(d) ADVISORY COMMITTEE.—Section 101(b)(1) of such Act (15 U.S.C. 5511(b)(1)) is amended by inserting after ''an advisory committee on high-performance computing,'' the following: ''in which the co-chairs shall be members of the President's Council of Advisors on Science and Technology and with the remainder of the committee''.

(e) REPORT.—Section 101(a)(3) of such Act (15 U.S.C. 5511(a)(3)) is amended—

(1) in subparagraph (C)—

(A) by striking ''is submitted,'' and inserting ''is submitted, the levels for the previous fiscal year,''; and

(B) by striking ''each Program Component Area;'' and inserting ''each Program Component Area and research area supported in accordance with section 104;'';

(2) in subparagraph (D)—

(A) by striking ''each Program Component Area,'' and inserting ''each Program Component Area and research area supported in accordance with section 104,'';

(B) by striking ''is submitted,'' and inserting ''is submitted, the levels for the previous fiscal year,''; and

(C) by striking ''and'' after the semicolon;

(3) by redesignating subparagraph (E) as subparagraph (G); and

(4) by inserting after subparagraph (D) the following new subparagraphs:

''(E) include a description of how the objectives for each Program Component Area, and the objectives for activities that involve multiple Program Component Areas, relate to the objectives of the Program identified in the strategic plan required under subsection (e);

''(F) include—

''(i) a description of the funding required by the National Coordination Office to perform the functions specified under section 102(b) for the next fiscal year by category of activity;

''(ii) a description of the funding required by such Office to perform the functions specified under section 102(b) for the current fiscal year by category of activity; and

''(iii) the amount of funding provided for such Office for the current fiscal year by each agency participating in the Program; and''.

(f) DEFINITION.—Section 4 of such Act (15 U.S.C. 5503) is amended—

(1) by redesignating paragraphs (1) through (7) as paragraphs (2) through (8), respectively;

(2) by inserting before paragraph (2), as so redesignated, the following new paragraph:

''(1) 'cyber-physical systems' means physical or engineered systems whose networking and information technology functions and physical elements are deeply integrated and are actively connected to the physical world through sensors, actuators, or other means to perform monitoring and control functions;'';

(3) in paragraph (4), as so redesignated—

(A) by striking ''high-performance computing'' and inserting ''networking and information technology''; and

(B) by striking ''supercomputer'' and inserting ''high-end computing'';

(4) in paragraph (6), as so redesignated, by striking ''network referred to as'' and all that follows through the semicolon and inserting ''network, including advanced computer networks of Federal agencies and departments;''; and

(5) in paragraph (7), as so redesignated, by striking ''National High-Performance Computing Program'' and inserting ''networking and information technology research and development program''.

SEC. 113. LARGE-SCALE RESEARCH IN AREAS OF NATIONAL IMPORTANCE.

Title I of such Act (15 U.S.C. 5511) is amended by adding at the end the following new section:

''SEC. 104. LARGE-SCALE RESEARCH IN AREAS OF NATIONAL IMPORTANCE.

''(a) IN GENERAL.—The Program shall encourage agencies identified in section 101(a)(3)(B) to support large-scale, long-term, interdisciplinary research and development activities in networking and information technology directed toward application areas that have the potential for significant contributions to national economic competitiveness and for other significant societal benefits. Such activities, ranging from basic research to the demonstration of technical solutions, shall be designed to advance the development of research discoveries. The advisory committee established under section 101(b) shall make recommendations to the Program for candidate research and development areas for support under this section.

''(b) CHARACTERISTICS.—

''(1) IN GENERAL.—Research and development activities under this section shall—

''(A) include projects selected on the basis of applications for support through a competitive, merit-based process;

''(B) involve collaborations among researchers in institutions of higher education and industry, and may involve nonprofit research institutions and Federal laboratories, as appropriate;

''(C) when possible, leverage Federal investments through collaboration with related State initiatives; and

''(D) include a plan for fostering the transfer of research discoveries and the results of technology demonstration activities, including from institutions of higher education and Federal laboratories, to industry for commercial development.

''(2) COST-SHARING.—In selecting applications for support, the agencies shall give special consideration to projects that include cost sharing from non-Federal sources.

''(3) AGENCY COLLABORATION.—If 2 or more agencies identified in section 101(a)(3)(B), or other appropriate agencies, are working on large-scale research and development activities in the same area of national importance, then such agencies shall strive to collaborate through joint solicitation and selection of applications for support and subsequent funding of projects.

''(4) INTERDISCIPLINARY RESEARCH CENTERS.—Research and development activities under this section may be supported through interdisciplinary research centers that are organized to investigate basic research questions and carry out technology demonstration activities in areas described in subsection (a). Research may be carried out through existing interdisciplinary centers, including those authorized under section 7024(b)(2) of the America COMPETES Act (Public Law 110–69; 42 U.S.C. 1862o–10).''.

SEC. 114. CYBER-PHYSICAL SYSTEMS AND INFORMATION MANAGEMENT.

(a) ADDITIONAL PROGRAM CHARACTERISTICS.—Section 101(a)(1) of such Act (15 U.S.C. 5511(a)(1)) is amended—

(1) in subparagraph (H), by striking ''and'' after the semicolon;

(2) in subparagraph (I), by striking the period at the end and inserting a semicolon; and

(3) by adding at the end the following new subparagraphs:

''(J) provide for increased understanding of the scientific principles of cyber-physical systems and improve the methods available for the design, development, and operation of cyber-physical systems that are characterized by high reliability, safety, and security; and

''(K) provide for research and development on human-computer interactions, visualization, and information management.''.

(b) TASK FORCE.—Title I of such Act (15 U.S.C. 5511) is amended further by adding after section 104, as added by section 113 of this Act, the following new section:

''SEC. 105. UNIVERSITY/INDUSTRY TASK FORCE.

''(a) ESTABLISHMENT.—Not later than 180 days after the date of enactment of the Networking and Information Technology Research and Development Act of 2010, the Director of the National Coordination Office established under section 102 shall convene a task force to explore mechanisms for carrying out collaborative research and development activities for cyber-physical systems, including the related technologies required to enable these systems, through a consortium or other appropriate entity with participants from institutions of higher education, Federal laboratories, and industry.

''(b) FUNCTIONS.—The task force shall—

''(1) develop options for a collaborative model and an organizational structure for such entity under which the joint research and development activities could be planned, managed, and conducted effectively, including mechanisms for the allocation of resources among the participants in such entity for support of such activities;

''(2) propose a process for developing a research and development agenda for such entity, including objectives and milestones;

''(3) define the roles and responsibilities for the participants from institutions of higher education, Federal laboratories, and industry in such entity;

''(4) propose guidelines for assigning intellectual property rights and for the transfer of research results to the private sector; and

''(5) make recommendations for how such entity could be funded from Federal, State, and non-governmental sources.

''(c) COMPOSITION.—In establishing the task force under subsection (a), the Director of the National Coordination Office shall appoint an equal number of individuals from institutions of higher education and from industry with knowledge and expertise in cyber-physical systems, of which 2 may be selected from Federal laboratories.

''(d) REPORT.—Not later than 1 year after the date of enactment of the Networking and Information Technology Research and Development Act of 2010, the Director of the National Coordination Office shall transmit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science and Technology of the House of Representatives a report describing the findings and recommendations of the task force.''.

SEC. 115. NATIONAL COORDINATION OFFICE.

Section 102 of such Act (15 U.S.C. 5512) is amended to read as follows:

''SEC. 102. NATIONAL COORDINATION OFFICE.

''(a) ESTABLISHMENT.—The Director shall establish a National Coordination Office with a Director and full-time staff.

''(b) FUNCTIONS.—The National Coordination Office shall—

''(1) provide technical and administrative support to—

''(A) the agencies participating in planning and implementing the Program, including such support as needed in the development of the strategic plan under section 101(e); and

''(B) the advisory committee established under section 101(b);

''(2) serve as the primary point of contact on Federal networking and information technology activities for government organizations, academia, industry, professional societies, State computing and networking technology programs, interested citizen groups, and others to exchange technical and programmatic information;

''(3) solicit input and recommendations from a wide range of stakeholders during the development of each strategic plan required under section 101(e) through the convening of at least 1 workshop with invitees from academia, industry, Federal laboratories, and other relevant organizations and institutions;

''(4) conduct public outreach, including the dissemination of findings and recommendations of the advisory committee, as appropriate; and

''(5) promote access to and early application of the technologies, innovations, and expertise derived from Program activities to agency missions and systems across the Federal Government and to United States industry.

''(c) SOURCE OF FUNDING.—

''(1) IN GENERAL.—The operation of the National Coordination Office shall be supported by funds from each agency participating in the Program.

''(2) SPECIFICATIONS.—The portion of the total budget of such Office that is provided by each agency for each fiscal year shall be in the same proportion as each such agency's share of the total budget for the Program for the previous fiscal year, as specified in the report required under section 101(a)(3).''.

SEC. 116. IMPROVING NETWORKING AND INFORMATION TECHNOLOGY EDUCATION.

Section 201(a) of such Act (15 U.S.C. 5521(a)) is amended—

(1) by redesignating paragraphs (2) through (4) as paragraphs (3) through (5), respectively; and

(2) by inserting after paragraph (1) the following new paragraph:

''(2) the National Science Foundation shall use its existing programs, in collaboration with other agencies, as appropriate, to improve the teaching and learning of networking and information technology at all levels of education and to increase participation in networking and information technology fields, including by women and underrepresented minorities;''.

SEC. 117. CONFORMING AND TECHNICAL AMENDMENTS.

(a) SECTION 3.—Section 3 of such Act (15 U.S.C. 5502) is amended—

(1) in the matter preceding paragraph (1), by striking ''high-performance computing'' and inserting ''networking and information technology'';

(2) in paragraph (1), in the matter preceding subparagraph (A), by striking ''high-performance computing'' and inserting ''networking and information technology'';

(3) in subparagraphs (A) and (F) of paragraph (1), by striking ''high-performance computing'' each place it appears and inserting ''networking and information technology''; and

(4) in paragraph (2)—

(A) by striking ''high-performance computing and'' and inserting ''networking and information technology and''; and

(B) by striking ''high-performance computing network'' and inserting ''networking and information technology''.

(b) TITLE I.—The heading of title I of such Act (15 U.S.C. 5511) is amended by striking ''**HIGH-PERFORMANCE COMPUTING**'' and inserting ''**NETWORKING AND INFORMATION TECHNOLOGY**''.

(c) SECTION 101.—Section 101 of such Act (15 U.S.C. 5511) is amended—

(1) in the section heading, by striking ''**HIGH-PERFORMANCE COMPUTING**'' and inserting ''**NETWORKING AND INFORMATION TECHNOLOGY RESEARCH AND DEVELOPMENT**'';

(2) in subsection (a)—

(A) in the subsection heading, by striking ''NATIONAL HIGH-PERFORMANCE COMPUTING'' and inserting ''NETWORKING AND INFORMATION TECHNOLOGY RESEARCH AND DEVELOPMENT'';

(B) in paragraph (1) of such subsection—

(i) in the matter preceding subparagraph (A), by striking ''National High-Performance Computing Program'' and inserting ''networking and information technology research and development program'';

(ii) in subparagraph (A), by striking ''high-performance computing, including networking'' and inserting ''networking and information technology''; and

(iii) in subparagraphs (B), (C), and (G), by striking ''high-performance'' each place it appears and inserting ''high-end''; and

(C) in paragraph (2) of such subsection—

(i) in subparagraphs (A) and (C)—

(I) by striking ''high-performance computing'' each place it appears and inserting ''networking and information technology''; and

(II) by striking ''development, networking,'' each place it appears and inserting ''development,''; and

(ii) in subparagraphs (F) and (G), as redesignated by section 112(c)(1) of this Act, by striking ''high-performance'' each place it appears and inserting ''high-end'';

(3) in subsection (b)(1), in the matter preceding subparagraph (A), by striking ''high-performance computing'' both places it appears and inserting ''networking and information technology''; and

(4) in subsection (c)(1)(A), by striking ''high-performance computing'' and inserting ''networking and information technology''.

(d) SECTION 201.—Section 201(a)(1) of such Act (15 U.S.C. 5521(a)(1)) is amended by striking ''high-performance computing'' and all that follows through ''networking;'' and inserting ''networking and information research and development;''.

(e) SECTION 202.—Section 202(a) of such Act (15 U.S.C. 5522(a)) is amended by striking ''high-performance computing'' and inserting ''networking and information technology''.

(f) SECTION 203.—Section 203(a)(1) of such Act (15 U.S.C. 5523(a)(1)) is amended by striking ''high-performance computing and networking''

and inserting ''networking and information technology''.

(g) SECTION 204.—Section 204(a)(1) of such Act (15 U.S.C. 5524(a)(1)) is amended—

(1) in subparagraph (A), by striking ''high-performance computing systems and networks'' and inserting ''networking and information technology systems and capabilities''; and

(2) in subparagraph (C), by striking ''high-performance computing'' and inserting ''networking and information technology''.

(h) SECTION 205.—Section 205(a) of such Act (15 U.S.C. 5525(a)) is amended by striking ''computational'' and inserting ''networking and information technology''.

(i) SECTION 206.—Section 206(a) of such Act (15 U.S.C. 5526(a)) is amended by striking ''computational research'' and inserting ''networking and information technology research''.

(j) SECTION 208.—Section 208 of such Act (15 U.S.C. 5528) is amended—

*(1) in the section heading, by striking ''**HIGH-PERFORMANCE COMPUTING**'' and inserting ''**NETWORKING AND INFORMATION TECHNOLOGY**''; and*

(2) in subsection (a)—

(A) in paragraph (1), by striking ''High-performance computing and associated'' and inserting ''Networking and information'';

(B) in paragraph (2), by striking ''high-performance computing'' and inserting ''networking and information technologies'';

(C) in paragraph (4), by striking ''high-performance computers and associated'' and inserting ''networking and information''; and

(D) in paragraph (5), by striking ''high-performance computing and associated'' and inserting ''networking and information''.

Subtitle C—Other OSTP Provisions

SEC. 121. FEDERAL SCIENTIFIC COLLECTIONS.

(a) MANAGEMENT OF SCIENTIFIC COLLECTIONS.—The Office of Science and Technology Policy, in consultation with relevant Federal agencies, shall ensure the development of formal policies for the management and use of Federal scientific collections to improve the quality, organization, access, including online access, and long-term preservation of such collections for the benefit of the scientific enterprise.

(b) DEFINITION.—For the purposes of this section, the term ''scientific collection'' means a set of physical specimens, living or inanimate, created for the purpose of supporting science and serving as a long-term research asset, rather than for their market value as collectibles or their historical, artistic, or cultural significance.

(c) CLEARINGHOUSE.—The Office of Science and Technology Policy, in consultation with relevant Federal agencies, shall ensure the development of an online clearinghouse for information on the contents of and access to Federal scientific collections.

(d) DISPOSAL OF COLLECTIONS.—The policies developed under subsection (a) shall—

(1) require that, before disposing of a scientific collection, a Federal agency shall—

(A) conduct a review of the research value of the collection; and

(B) consult with researchers who have used the collection, and other potentially interested parties, concerning—

(i) the collection's value for research purposes; and

(ii) possible additional educational uses for the collection; and

(2) include procedures for Federal agencies to transfer scientific collections they no longer need to researchers at institutions or other entities qualified to manage the collections.

(e) COST PROJECTIONS.—The Office of Science and Technology Policy, in consultation with relevant Federal agencies, shall develop a common set of methodologies to be used by Federal agencies for the assessment and projection of costs associated with the management and preservation of their scientific collections.

SEC. 122. COORDINATION OF MANUFACTURING RESEARCH AND DEVELOPMENT.

(a) INTERAGENCY COMMITTEE.—The Director of the Office of Science and Technology Policy shall establish or designate an interagency committee under the National Science and Technology Council with the responsibility for planning and coordinating Federal programs and activities in manufacturing research and development.

(b) RESPONSIBILITIES OF COMMITTEE.—The interagency committee established or designated under subsection (a) shall—

(1) coordinate the manufacturing research and development programs and activities of the Federal agencies;

(2) establish goals and priorities for manufacturing research and development that will strengthen United States manufacturing; and

(3) develop and update every 5 years thereafter a strategic plan to guide Federal programs and activities in support of manufacturing research and development, which shall—

(A) specify and prioritize near-term and long-term research and development objectives, the anticipated time frame for achieving the objectives, and the metrics for use in assessing progress toward the objectives;

(B) specify the role of each Federal agency in carrying out or sponsoring research and development to meet the objectives of the strategic plan; and

(C) describe how the Federal agencies supporting manufacturing research and development will foster the transfer of research and development results into new manufacturing technologies, processes, and products for the benefit of society and the national interest.

(c) RECOMMENDATIONS.—In the development of the strategic plan required under subsection (b)(3), the Director of the Office of Science and Technology Policy, working through the interagency committee, shall take into consideration the recommendations of a wide range of stakeholders, including representatives from diverse manufacturing companies, academia, and other relevant organizations and institutions.

(d) REPORT TO CONGRESS.—Not later than 1 year after the date of enactment of this Act, the Director of the Office of Science and Technology Policy shall transmit the strategic plan developed under subsection (b)(3) to the Committee on Commerce, Science, and Transportation of the Senate, and the Committee on Science and Technology of the House of Representatives, and shall transmit subsequent updates to those committees when completed.

SEC. 123. INTERAGENCY PUBLIC ACCESS COMMITTEE.

(a) ESTABLISHMENT.—The Director of the Office of Science and Technology Policy shall establish a working group under the National Science and Technology Council with the responsibility to coordinate Federal science agency research and policies related to the dissemination and long-term stewardship of the results of unclassified research, including digital data and peer-reviewed scholarly publications, supported wholly, or in part, by funding from the Federal science agencies.

(b) RESPONSIBILITIES.—The working group established under subsection (a) shall—

(1) coordinate the development or designation of uniform standards for research data, the structure of full text and metadata, navigation tools, and other applications to achieve interoperability across Federal science agencies, across science and engineering disciplines, and between research data and scholarly publications, taking into account existing consensus standards, including international standards;

(2) coordinate Federal science agency programs and activities that support research and education on tools and systems required to ensure preservation and stewardship of all forms of digital research data, including scholarly publications;

(3) work with international science and technology counterparts to maximize interoperability between United States based unclassified research databases and international databases and repositories;

(4) solicit input and recommendations from, and collaborate with, non-Federal stakeholders, including universities, nonprofit and for-profit publishers, libraries, federally funded research scientists, and other organizations and institutions with a stake in long term preservation and access to the results of federally funded research; and

(5) establish priorities for coordinating the development of any Federal science agency policies related to public access to the results of federally funded research to maximize uniformity of such policies with respect to their benefit to, and potential economic or other impact on, the science and engineering enterprise and the stakeholders thereof.

(c) PATENT OR COPYRIGHT LAW.—Nothing in this section shall be construed to affect any right under the provisions of title 17 or 35, United States Code.

(d) REPORT TO CONGRESS.—Not later than 1 year after the date of enactment of this Act, the Director of the Office of Science and Technology Policy shall transmit a report to Congress describing—

(1) any priorities established under subsection (b)(5);

(2) the status of any Federal science agency policies related to public access to the results of federally funded research; and

(3) how any policies developed or being developed by Federal science agencies, as described in paragraph (2), incorporate input from the non-Federal stakeholders described in subsection (b)(4).

(e) DEFINITION.—For the purposes of this section, the term ''Federal science agency'' means any Federal agency with an annual extramural research expenditure of over $100,000,000.

SEC. 124. FULFILLING THE POTENTIAL OF WOMEN IN ACADEMIC SCIENCE AND ENGINEERING.

(a) DEFINITION.—In this section, the term ''Federal science agency'' means any Federal agency that is responsible for at least 2 percent of total Federal research and development funding to institutions of higher education, according to the most recent data available from the National Science Foundation.

(b) WORKSHOPS TO ENHANCE GENDER EQUITY IN ACADEMIC SCIENCE AND ENGINEERING.—

(1) IN GENERAL.—Not later than 6 months after the date of enactment of this Act, the Director of the Office of Science and Technology Policy shall develop a uniform policy for all Federal science agencies to carry out a program of workshops that educate program officers, members of grant review panels, institution of higher education STEM department chairs, and other federally funded researchers about methods that minimize the effects of gender bias in evaluation of Federal research grants and in the related academic advancement of actual and potential recipients of these grants, including hiring, tenure, promotion, and selection for any honor based in part on the recipient's research record.

(2) INTERAGENCY COORDINATION.—The Director of the Office of Science and Technology Policy shall ensure that programs of workshops across the Federal science agencies are coordinated and supported jointly as appropriate. As part of this process, the Director of the Office of Science and Technology Policy shall ensure that at least 1 workshop is supported every 2 years among the Federal science agencies in each of the major science and engineering disciplines supported by those agencies.

(3) ORGANIZATIONS ELIGIBLE TO CARRY OUT WORKSHOPS.—Federal science agencies may carry out the program of workshops under this subsection by making grants to eligible organizations. In addition to any other organizations made eligible by the Federal science agencies, the following organizations are eligible for grants under this subsection:

(A) Nonprofit scientific and professional societies and organizations that represent one or more STEM disciplines.

(B) Nonprofit organizations that have the primary mission of advancing the participation of women in STEM.

(4) CHARACTERISTICS OF WORKSHOPS.—The workshops shall have the following characteristics:

(A) Invitees to workshops shall include at least—

(i) the chairs of departments in the relevant discipline from at least the top 50 institutions of higher education, as determined by the amount of Federal research and development funds obligated to each institution of higher education in the prior year based on data available from the National Science Foundation;

(ii) members of any standing research grant review panel appointed by the Federal science agencies in the relevant discipline;

(iii) in the case of science and engineering disciplines supported by the Department of Energy, the individuals from each of the Department of Energy National Laboratories with personnel management responsibilities comparable to those of an institution of higher education department chair; and

(iv) Federal science agency program officers in the relevant discipline, other than program officers that participate in comparable workshops organized and run specifically for that agency's program officers.

(B) Activities at the workshops shall include research presentations and interactive discussions or other activities that increase the awareness of the existence of gender bias in the grantmaking process and the development of the academic record necessary to qualify as a grant recipient, including recruitment, hiring, tenure review, promotion, and other forms of formal recognition of individual achievement, and provide strategies to overcome such bias.

(C) Research presentations and other workshop programs, as appropriate, shall include a discussion of the unique challenges faced by women who are members of historically underrepresented groups.

(D) Workshop programs shall include information on best practices and the value of mentoring undergraduate and graduate women students as well as outreach to girls earlier in their STEM education.

(5) REPORT.—

(A) IN GENERAL.—Not later than 5 years after the date of enactment of this Act, the Director of the Office of Science and Technology Policy shall transmit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report evaluating the effectiveness of the program carried out under this subsection to reduce gender bias towards women engaged in research funded by the Federal Government. The Director of the Office of Science and Technology Policy shall include in this report any recommendations for improving the evaluation process described in subparagraph (B).

(B) MINIMUM CRITERIA FOR EVALUATION.—In determining the effectiveness of the program, the Director of the Office of Science and Technology Policy shall consider, at a minimum—

(i) the rates of participation by invitees in the workshops authorized under this subsection;

(ii) the results of attitudinal surveys conducted on workshop participants before and after the workshops;

(iii) any relevant institutional policy or practice changes reported by participants; and

(iv) for individuals described in paragraph (4)(A)(i) or (iii) who participated in at least 1 workshop 3 or more years prior to the due date for the report, trends in the data for the department represented by the chair or employee including faculty data related to gender as described in section 216.

(C) INSTITUTIONAL ATTENDANCE AT WORKSHOPS.—As part of the report under subparagraph (A), the Director of the Office of Science and Technology Policy shall include a list of institutions of higher education science and engineering departments whose representatives attended the workshops required under this subsection.

(6) MINIMIZING COSTS.—To the extent practicable, workshops shall be held in conjunction with national or regional disciplinary meetings to minimize costs associated with participant travel.

(c) EXTENDED RESEARCH GRANT SUPPORT AND INTERIM TECHNICAL SUPPORT FOR CAREGIVERS.—

(1) POLICIES FOR CAREGIVERS.—Not later than 6 months after the date of enactment of this Act, the Director of the Office of Science and Technology Policy shall develop a uniform policy to—

(A) extend the period of grant support for federally funded researchers who have caregiving responsibilities; and

(B) provide funding for interim technical staff support for federally funded researchers who take a leave of absence for caregiving responsibilities.

(2) REPORT.—Upon developing the policy required under paragraph (1), the Director of the Office of Science and Technology Policy shall transmit a copy of the policy to the Committee on Science and Technology of the House of Representatives and to the Committee on Commerce, Science, and Transportation of the Senate.

(d) COLLECTION OF DATA ON FEDERAL RESEARCH GRANTS.—

(1) IN GENERAL.—Each Federal science agency shall collect standardized annual composite information on demographics, field, award type and budget request, review score, and funding outcome for all applications for research and development grants to institutions of higher education supported by that agency.

(2) REPORTING OF DATA.—

(A) The Director of the Office of Science and Technology Policy shall establish a policy to ensure uniformity and standardization of data collection required under paragraph (1).

(B) Not later than 2 years after the date of enactment of this Act, and annually thereafter, each Federal science agency shall submit data collected under paragraph (1) to the National Science Foundation.

(C) The National Science Foundation shall be responsible for storing and publishing all of the grant data submitted under subparagraph (B) in conjunction with the biennial report required under section 37 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885d).

TITLE II—NATIONAL SCIENCE FOUNDATION

SEC. 201. SHORT TITLE.

This title may be cited as the ''National Science Foundation Authorization Act of 2010''.

Subtitle A—General Provisions

SEC. 211. DEFINITIONS.

In this title:

(1) DIRECTOR.—The term ''Director'' means the Director of the National Science Foundation established under section 2 of the National Science Foundation Act of 1950 (42 U.S.C. 1861).

(2) FOUNDATION.—The term ''Foundation'' means the National Science Foundation established under section 2 of the National Science Foundation Act of 1950 (42 U.S.C. 1861).

(3) INSTITUTION OF HIGHER EDUCATION.—The term ''institution of higher education'' has the meaning given such term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

(4) STATE.—The term ''State'' means one of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or any other territory or possession of the United States.

(5) STEM.—The term ''STEM'' means science, technology, engineering, and mathematics.

(6) UNITED STATES.—The term ''United States'' means the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and any other territory or possession of the United States.

SEC. 212. AUTHORIZATION OF APPROPRIATIONS.

(a) FISCAL YEAR 2011.—

(1) IN GENERAL.—There are authorized to be appropriated to the Foundation $7,481,000,000 for fiscal year 2011.

(2) SPECIFIC ALLOCATIONS.—Of the amount authorized under paragraph (1)—

(A) $6,020,000,000 shall be made available for research and related activities;

(B) $945,000,000 shall be made available for education and human resources;

(C) $166,000,000 shall be made available for major research equipment and facilities construction;

(D) $330,000,000 shall be made available for agency operations and award management;

(E) $4,840,000 shall be made available for the Office of the National Science Board; and

(F) $14,830,000 shall be made available for the Office of Inspector General.

(b) FISCAL YEAR 2012.—

(1) IN GENERAL.—There are authorized to be appropriated to the Foundation $8,127,000,000 for fiscal year 2012.

(2) SPECIFIC ALLOCATIONS.—Of the amount authorized under paragraph (1)—

(A) $6,496,000,000 shall be made available for research and related activities;

(B) $1,020,000,000 shall be made available for education and human resources;

(C) $235,000,000 shall be made available for major research equipment and facilities construction;

(D) $356,000,000 shall be made available for agency operations and award management;

(E) $5,010,000 shall be made available for the Office of the National Science Board; and

(F) $15,350,000 shall be made available for the Office of Inspector General.

(c) FISCAL YEAR 2013.—

(1) IN GENERAL.—There are authorized to be appropriated to the Foundation $8,764,000,000 for fiscal year 2013.

(2) SPECIFIC ALLOCATIONS.—Of the amount authorized under paragraph (1)—

(A) $7,009,000,000 shall be made available for research and related activities;

(B) $1,100,000,000 shall be made available for education and human resources;

(C) $250,000,000 shall be made available for major research equipment and facilities construction;

(D) $384,000,000 shall be made available for agency operations and award management;

(E) $5,180,000 shall be made available for the Office of the National Science Board; and

(F) $15,890,000 shall be made available for the Office of Inspector General.

(d) FISCAL YEAR 2014.—

(1) IN GENERAL.—There are authorized to be appropriated to the Foundation $9,436,000,000 for fiscal year 2014.

(2) SPECIFIC ALLOCATIONS.—Of the amount authorized under paragraph (1)—

(A) $7,562,000,000 shall be made available for research and related activities;

(B) $1,187,000,000 shall be made available for education and human resources;

(C) $250,000,000 shall be made available for major research equipment and facilities construction;

(D) $415,000,000 shall be made available for agency operations and award management;

(E) $5,370,000 shall be made available for the Office of the National Science Board; and

(F) $16,440,000 shall be made available for the Office of Inspector General.

(e) FISCAL YEAR 2015.—

(1) IN GENERAL.—There are authorized to be appropriated to the Foundation $10,161,000,000 for fiscal year 2015.

(2) SPECIFIC ALLOCATIONS.—Of the amount authorized under paragraph (1)—

(A) $8,160,000,000 shall be made available for research and related activities;

(B) $1,281,000,000 shall be made available for education and human resources;

(C) $250,000,000 shall be made available for major research equipment and facilities construction;

(D) $447,000,000 shall be made available for agency operations and award management;

(E) $5,550,000 shall be made available for the Office of the National Science Board; and

(F) $17,020,000 shall be made available for the Office of Inspector General.

SEC. 213. NATIONAL SCIENCE BOARD ADMINISTRATIVE AMENDMENTS.

(a) STAFFING AT THE NATIONAL SCIENCE BOARD.—Section 4(g) of the National Science Foundation Act of 1950 (42 U.S.C. 1863(g)) is amended by striking ''not more than 5''.

(b) SCIENCE AND ENGINEERING INDICATORS DUE DATE.—Section 4(j)(1) of the National Science Foundation Act of 1950 (42 U.S.C. 1863(j)(1)) is amended by striking ''January 15'' and inserting ''May 31''.

(c) NATIONAL SCIENCE BOARD REPORTS.—Section 4(j)(2) of the National Science Foundation Act of 1950 (42 U.S.C. 1863(j)(2)) is amended by inserting ''within the authority of the Foundation (or otherwise as requested by the appropriate Congressional committees of jurisdiction or the President)'' after ''individual policy matters''.

(d) BOARD ADHERENCE TO SUNSHINE ACT.—Section 15(a) of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n–5(a)) is amended—

(1) by striking paragraph (3) and redesignating paragraphs (4) and (5) as paragraphs (3) and (4), respectively;

(2) in paragraph (3), as so redesignated by paragraph (1) of this subsection—

(A) by striking ''February 15'' and inserting ''April 15''; and

(B) by striking ''the audit required under paragraph (3) along with'' and inserting ''any''; and

(3) in paragraph (4), as so redesignated by paragraph (1) of this subsection, by striking ''To facilitate the audit required under paragraph (3) of this subsection, the'' and inserting ''The''.

SEC. 214. BROADER IMPACTS REVIEW CRITERION.

(a) GOALS.—The Foundation shall apply a Broader Impacts Review Criterion to achieve the following goals:

(1) Increased economic competitiveness of the United States.

(2) Development of a globally competitive STEM workforce.

(3) Increased participation of women and underrepresented minorities in STEM.

(4) Increased partnerships between academia and industry.

(5) Improved pre-K-12 STEM education and teacher development.

(6) Improved undergraduate STEM education.

(7) Increased public scientific literacy.

(8) Increased national security.

(b) POLICY.—Not later than 6 months after the date of enactment of this Act, the Director shall develop and implement a policy for the Broader Impacts Review Criterion that—

(1) provides for educating professional staff at the Foundation, merit review panels, and applicants for Foundation research grants on the policy developed under this subsection;

(2) clarifies that the activities of grant recipients undertaken to satisfy the Broader Impacts Review Criterion shall—

(A) to the extent practicable employ proven strategies and models and draw on existing programs and activities; and

(B) when novel approaches are justified, build on the most current research results;

(3) allows for some portion of funds allocated to broader impacts under a research grant to be used for assessment and evaluation of the broader impacts activity;

(4) encourages institutions of higher education and other nonprofit education or research organizations to develop and provide, either as individual institutions or in partnerships thereof, appropriate training and programs to assist Foundation-funded principal investigators at their institutions in achieving the goals of the Broader Impacts Review Criterion as described in subsection (a); and

(5) requires principal investigators applying for Foundation research grants to provide evidence of institutional support for the portion of the investigator's proposal designed to satisfy the Broader Impacts Review Criterion, including evidence of relevant training, programs, and other institutional resources available to the investigator from either their home institution or organization or another institution or organization with relevant expertise.

SEC. 215. NATIONAL CENTER FOR SCIENCE AND ENGINEERING STATISTICS.

(a) ESTABLISHMENT.—There is established within the Foundation a National Center for Science and Engineering Statistics (in this section referred to as the ''Center''), that shall serve as a central Federal clearinghouse for the collection, interpretation, analysis, and dissemination of objective data on science, engineering, technology, and research and development.

(b) DUTIES.—In carrying out subsection (a) of this section, the Director, acting through the Center shall—

(1) collect, acquire, analyze, report, and disseminate statistical data related to the science and engineering enterprise in the United States and other nations that is relevant and useful to practitioners, researchers, policymakers, and the public, including statistical data on—

(A) research and development trends;

(B) the science and engineering workforce;

(C) United States competitiveness in science, engineering, technology, and research and development; and

(D) the condition and progress of United States STEM education;

(2) support research using the data it collects, and on methodologies in areas related to the work of the Center; and

(3) support the education and training of researchers in the use of large-scale, nationally representative data sets.

(c) STATISTICAL REPORTS.—The Director or the National Science Board, acting through the Center, shall issue regular, and as necessary, special statistical reports on topics related to the national and international science and engineering enterprise such as the biennial report required by section 4 (j)(1) of the National Science Foundation Act of 1950 (42 U.S.C. 1863(j)(1)) on indicators of the state of science and engineering in the United States.

SEC. 216. COLLECTION OF DATA ON DEMOGRAPHICS OF FACULTY.

(a) COLLECTION OF DATA.—The Director shall report, in conjunction with the biennial report required under section 37 of the Science and Engineering Equal Opportunities Act (42 U.S.C.19 1885d), statistical summary data on the demographics of STEM discipline faculty at institutions of higher education in the United States. At a minimum, the Director shall consider—

(1) the number and percent of faculty by gender, race, and age;

(2) the number and percent of faculty at each rank, by gender, race, and age;

(3) the number and percent of faculty who are in nontenure-track positions, including teaching and research, by gender, race, and age;

(4) the number of faculty who are reviewed for promotion, including tenure, and the percentage of that number who are promoted, by gender, race, and age;

(5) faculty years in rank by gender, race, and age;

(6) faculty attrition by gender, race, and age;

(7) the number and percent of faculty hired by rank, gender, race, and age; and

(8) the number and percent of faculty in leadership positions, including endowed or named chairs, serving on promotion and tenure committees, by gender, race, and age.

(b) RECOMMENDATIONS.—The Director shall solicit input and recommendations from relevant stakeholders, including representatives from institutions of higher education and nonprofit organizations, on the collection of data required under subsection (a), including the development of standard definitions on the terms and categories to be used in the collection of such data.

(c) REPORT TO CONGRESS.—Not later than 2 years after the date of enactment of this Act, the Director shall submit a report to Congress on how the Foundation will gather the demographic data on STEM faculty, including—

(1) a description of the data to be reported and the sources of those data;

(2) justification for the exclusion of any data described in paragraph (1); and

(3) a list of the definitions for the terms and categories, such as ''faculty'' and ''leadership positions'', to be applied in the reporting of all data described in paragraph (1).

Subtitle B—Research and Innovation

SEC. 221. SUPPORT FOR POTENTIALLY TRANSFORMATIVE RESEARCH.

(a) POLICY.—The Director shall establish a policy that requires the Foundation to use at least 5 percent of its research budget to fund high-risk, high-reward basic research proposals. Support for facilities and infrastructure, including preconstruction design and operations and maintenance of major research facilities, shall not be counted as part of the research budget for the purposes of this section.

(b) IMPLEMENTATION.—In implementing such policy, the Foundation may—

(1) develop solicitations specifically for high-risk, high-reward basic research;

(2) establish review panels for the primary purpose of selecting high-risk, high-reward proposals or modify instructions to standard review panels to require identification of high-risk, high-reward proposals; and

(3) support workshops and participate in conferences with the primary purpose of identifying new opportunities for high-risk, high-reward basic research, especially at interdisciplinary interfaces.

(c) DEFINITION.—For purposes of this section, the term ''high-risk, high-reward basic research'' means research driven by ideas that have the potential to radically change our understanding of an important existing scientific or engineering concept, or leading to the creation of a new paradigm or field of science or engineering, and that is characterized by its challenge to current understanding or its pathway to new frontiers.

SEC. 222. FACILITATING INTERDISCIPLINARY COLLABORATIONS FOR NATIONAL NEEDS.

(a) IN GENERAL.—The Director shall award competitive, merit-based awards in amounts not to exceed $5,000,000 over a period of up to 5 years to interdisciplinary research collaborations that are likely to assist in addressing critical challenges to national security, competitiveness, and societal well-being and that—

(1) involve at least 2 co-equal principal investigators at the same or different institutions;

(2) draw upon well-integrated, diverse teams of investigators, including students or postdoctoral researchers, from one or more disciplines; and

(3) foster creativity and pursue high-risk, high-reward research.

(b) PRIORITY.—In selecting grant recipients under this section, the Director shall give priority to applicants that propose to utilize advances in cyberinfrastructure and simulation-based science and engineering.

SEC. 223. NATIONAL SCIENCE FOUNDATION MANUFACTURING RESEARCH AND EDUCATION.

(a) MANUFACTURING RESEARCH.—The Director shall carry out a program to award merit-reviewed, competitive grants to institutions of higher education to support fundamental research leading to transformative advances in manufacturing technologies, processes, and enterprises that will support United States manufacturing through improved performance, productivity, sustainability, and competitiveness. Research areas may include—

(1) nanomanufacturing;

(2) manufacturing and construction machines and equipment, including robotics, automation, and other intelligent systems;

(3) manufacturing enterprise systems;

(4) advanced sensing and control techniques;

(5) materials processing; and

(6) information technologies for manufacturing, including predictive and real-time models and simulations, and virtual manufacturing.

(b) MANUFACTURING EDUCATION.—In order to help ensure a well-trained manufacturing workforce, the Director shall award grants to strengthen and expand scientific and technical education and training in advanced manufacturing, including through the Foundation's Advanced Technological Education program.

SEC. 224. STRENGTHENING INSTITUTIONAL RESEARCH PARTNERSHIPS.

(a) IN GENERAL.—For any Foundation research grant, in an amount greater than $2,000,000, to be carried out through a partnership that includes one or more minority-serving institutions or predominantly undergraduate institutions and one or more institutions described in subsection (b), the Director shall award funds directly, according to the budget justification described in the grant proposal, to at least two of the institutions of higher education in the partnership, including at least one minority-serving institution or one predominantly undergraduate institution, to ensure a strong and equitable partnership.

(b) INSTITUTIONS.—The institutions referred to in subsection (a) are institutions of higher education that are among the 100 institutions receiving, over the 3-year period immediately preceding the awarding of grants, the highest amount of research funding from the Foundation.

SEC. 225. NATIONAL SCIENCE BOARD REPORT ON MID-SCALE INSTRUMENTATION.

(a) MID-SCALE RESEARCH INSTRUMENTATION NEEDS.—The National Science Board shall evaluate the needs, across all disciplines supported by the Foundation, for mid-scale research instrumentation that falls between the instruments funded by the Major Research Instrumentation program and the very large projects funded by the Major Research Equipment and Facilities Construction program.

(b) REPORT ON MID-SCALE RESEARCH INSTRUMENTATION PROGRAM.—Not later than 1 year after the date of enactment of this Act, the National Science Board shall submit to Congress a report on mid-scale research instrumentation at the Foundation. At a minimum, this report shall include—

(1) the findings from the Board's evaluation of instrumentation needs required under subsection (a), including a description of differences across disciplines and Foundation research directorates;

(2) a recommendation or recommendations regarding how the Foundation should set priorities for mid-scale instrumentation across disciplines and Foundation research directorates;

(3) a recommendation or recommendations regarding the appropriateness of expanding existing programs, including the Major Research Instrumentation program or the Major Research Equipment and Facilities Construction program, to support more instrumentation at the mid-scale;

(4) a recommendation or recommendations regarding the need for and appropriateness of a new, Foundation-wide program or initiative in support of mid-scale instrumentation, including any recommendations regarding the administration of and budget for such a program or initiative and the appropriate scope of instruments to be funded under such a program or initiative; and

(5) any recommendation or recommendations regarding other options for supporting mid-scale research instrumentation at the Foundation.

SEC. 226. SENSE OF CONGRESS ON OVERALL SUPPORT FOR RESEARCH INFRASTRUCTURE AT THE FOUNDATION.

It is the sense of Congress that the Foundation should strive to keep the percentage of the Foundation budget devoted to research infrastructure in the range of 24 to 27 percent, as recommended in the 2003 National Science Board report entitled ''Science and Engineering Infrastructure for the 21st Century''.

SEC. 227. PARTNERSHIPS FOR INNOVATION.

(a) IN GENERAL.—The Director shall carry out a program to award merit-reviewed, competitive grants to institutions of higher education to establish and to expand partnerships that promote innovation and increase the economic and social impact of research by developing tools and resources to connect new scientific discoveries to practical uses.

(b) PARTNERSHIPS.—

(1) IN GENERAL.—To be eligible for funding under this section, an institution of higher education must propose establishment of a partnership that—

(A) includes at least one private sector entity; and

(B) may include other institutions of higher education, public sector institutions, private sector entities, and social enterprise nonprofit organizations.

(2) PRIORITY.—In selecting grant recipients under this section, the Director shall give priority to partnerships that include one or more institutions of higher education that are among the 100 institutions receiving, over the 3-year period immediately preceding the awarding of grants, the highest amount of research funding from the Foundation and at least one of the following:

(A) A minority serving institution.

(B) A primarily undergraduate institution.

(C) A 2-year institution of higher education.

(c) PROGRAM.—Proposals funded under this section shall seek to—

(1) increase the economic or social impact of the most promising research at the institution or institutions of higher education that are members of the partnership through knowledge transfer or commercialization;

(2) increase the engagement of faculty and students across multiple disciplines and departments, including faculty and students in schools of business and other appropriate non-STEM fields and disciplines in knowledge transfer activities;

(3) enhance education and mentoring of students and faculty in innovation and entrepreneurship through networks, courses, and development of best practices and curricula;

(4) strengthen the culture of the institution or institutions of higher education to undertake and participate in activities related to innovation and leading to economic or social impact;

(5) broaden the participation of all types of institutions of higher education in activities to meet STEM workforce needs and promote innovation and knowledge transfer; and

(6) build lasting partnerships with local and regional businesses, local and State governments, and other relevant entities.

(d) ADDITIONAL CRITERIA.—In selecting grant recipients under this section, the Director shall also consider the extent to which the applicants are able to demonstrate evidence of institutional support for, and commitment to—

(1) achieving the goals of the program as described in subsection (c);

(2) expansion to an institution-wide program if the initial proposal is not for an institution-wide program; and

(3) sustaining any new innovation tools and resources generated from funding under this program.

(e) LIMITATION.—No funds provided under this section may be used to construct or renovate a building or structure.

SEC. 228. PRIZE AWARDS.

(a) SHORT TITLE.—This section may be cited as the ''Generating Extraordinary New Innovations in the United States Act of 2010''.

(b) IN GENERAL.—The Director shall carry out a pilot program to award innovation inducement cash prizes in any area of research supported by the Foundation. The Director may carry out a program of cash prizes only in conformity with this section.

(c) TOPICS.—In identifying topics for prize competitions under this section, the Director shall—

(1) consult widely both within and outside the Federal Government;

(2) give priority to high-risk, high-reward research challenges and to problems whose solution could improve the economic competitiveness of the United States; and

(3) give consideration to the extent to which the topics have the potential to raise public awareness about federally sponsored research.

(d) TYPES OF CONTESTS.—The Director shall consider all categories of innovation inducement prizes, including—

(1) contests in which the award is to the first team or individual who accomplishes a stated objective; and

(2) contests in which the winner is the team or individual who comes closest to achieving an objective within a specified time.

(e) ADVERTISING AND ANNOUNCEMENT.—

(1) ADVERTISING AND SOLICITATION OF COMPETITORS.—The Director shall widely advertise prize competitions to encourage broad participation, including by individuals, institutions of higher education, nonprofit organizations, and businesses.

(2) ANNOUNCEMENT THROUGH FEDERAL REGISTER NOTICE.—The Director shall announce each prize competition by publishing a notice in the Federal Register. This notice shall include the subject of the competition, the duration of the competition, the eligibility requirements for participation in the competition, the process for participants to register for the competition, the amount of the prize, and the criteria for awarding the prize, including the method by which the prize winner or winners will be selected.

(3) TIME TO ANNOUNCEMENT.—The Director shall announce a prize competition within 18 months after receipt of appropriated funds.

(f) FUNDING.—

(1) FUNDING SOURCES.—Prizes under this section shall consist of Federal appropriated funds and any funds raised pursuant to donations authorized under section 11(f) of the National Science Foundation Act of 1950 (42 U.S.C. 1870(f)) for specific prize competitions.

(2) ANNOUNCEMENT OF PRIZES.—The Director may not issue a notice as required by subsection (e)(2) until all of the funds needed to pay out the announced amount of the prize have been appropriated or committed in writing by another entity pursuant to paragraph (1).

(g) ELIGIBILITY.—To be eligible to win a prize under this section, an individual or entity—

(1) shall have complied with all of the requirements under this section;

(2) in the case of a private entity, shall be incorporated in and maintain a primary place of business in the United States, and in the case of an individual, whether participating singly or in a group, shall be a United States citizen or national, or an alien lawfully admitted to the United States for permanent residence;

(3) shall not be a Federal entity, a Federal employee acting within the scope of his or her

employment, or a person employed at a Federal laboratory acting within the scope of his or her employment; and

(4) shall not have utilized Federal funds to engage in the research for which the prize is being awarded.

(h) AWARDS.—

(1) NUMBER OF COMPETITIONS.—The Director may announce up to 5 prize competitions through the end of fiscal year 2013.

(2) SIZE OF AWARD.—The Director may determine the amount of each prize award based on the prize topic, but no award shall be less than $1,000,000 or greater than $3,000,000.

(3) SELECTING WINNERS.—The Director may convene an expert panel to select a winner of a prize competition. If the panel is unable to select a winner, the Director shall determine the winner of the prize.

(4) PUBLIC OUTREACH.—The Director shall publicly award prizes utilizing the Foundation's existing public affairs and public outreach resources.

(i) ADMINISTERING THE COMPETITION.—The Director may enter into an agreement with a private, nonprofit entity to administer the prize competition, subject to the provisions of this section.

(j) INTELLECTUAL PROPERTY.—The Federal Government shall not, by virtue of offering or awarding a prize under this section, be entitled to any intellectual property rights derived as a consequence of, or in direct relation to, the participation by a registered participant in a competition authorized by this section. This subsection shall not be construed to prevent the Federal Government from negotiating a license for the use of intellectual property developed for a prize competition under this section.

(k) LIABILITY.—The Director may require a registered participant in a prize competition under this section to waive liability against the Federal Government for injuries and damages that result from participation in such competition.

(l) NONSUBSTITUTION.—Any programs created under this section shall not be considered a substitute for Federal research and development programs.

(m) REPORTING REQUIREMENT.—Not later than 5 years after the date of enactment of this Act, the National Science Board shall transmit to Congress a report containing the results of a review and assessment of the pilot program under this section, including—

(1) a description of the nature and status of all completed or ongoing prize competitions carried out under this section, including any scientific achievements, publications, intellectual property, or commercialized technology that resulted from such competitions;

(2) any recommendations regarding changes to, the termination of, or continuation of the pilot program;

(3) an analysis of whether the program is attracting contestants more diverse than the Foundation's traditional academic constituency;

(4) an analysis of whether public awareness of innovation or of the goal of the particular prize or prizes is enhanced;

(5) an analysis of whether the Foundation's public image or ability to increase public scientific literacy is enhanced through the use of innovation inducement prizes; and

(6) an analysis of the extent to which private funds are being used to support registered participants.

(n) EARLY TERMINATION OF CONTESTS.—The Director shall terminate a prize contest before any registered participant wins if the Director determines that an unregistered entity has produced an innovation that would otherwise have qualified for the prize award.

(o) AUTHORIZATION OF APPROPRIATIONS.—

(1) IN GENERAL.—

(A) AWARDS.—There are authorized to be appropriated to the Director for the period encompassing fiscal years 2011 through 2013 $12,000,000 for carrying out this section.

(B) ADMINISTRATION.—Of the amounts authorized in subparagraph (A), not more than 15 percent for each fiscal year shall be available for the administrative costs of carrying out this section.

(2) CARRYOVER OF FUNDS.—Funds appropriated for prize awards under this section shall remain available until expended, and may be transferred, reprogrammed, or expended for other purposes as authorized by law only after the expiration of 7 fiscal years after the fiscal year for which the funds were originally appropriated. No provision in this section permits obligation or payment of funds in violation of section 1341 of title 31 of the United States Code (commonly referred to as the Anti-Deficiency Act).

Subtitle C—STEM Education and Workforce Training

SEC. 241. GRADUATE STUDENT SUPPORT.

(a) FINDING.—The Congress finds that—

(1) the Integrative Graduate Education and Research Traineeship program is an important program for training the next generation of scientists and engineers in team-based interdisciplinary research and problem solving, and for providing them with the many additional skills, such as communication skills, needed to thrive in diverse STEM careers; and

(2) the Integrative Graduate Education and Research Traineeship program is no less valuable to the preparation and support of graduate students than the Foundation's Graduate Research Fellowship program.

(b) EQUAL TREATMENT OF IGERT AND GRF.—Beginning in fiscal year 2011, the Director shall increase or, if necessary, decrease funding for the Foundation's Integrative Graduate Education and Research Traineeship program (or any program by which it is replaced) at least at the same rate as it increases or decreases funding for the Graduate Research Fellowship program.

(c) SUPPORT FOR GRADUATE STUDENT RESEARCH FROM THE RESEARCH ACCOUNT.—For each of the fiscal years 2011 through 2015, at least 50 percent of the total Foundation funds allocated to the Integrative Graduate Education and Research Traineeship program and the Graduate Research Fellowship program shall come from funds appropriated for Research and Related Activities.

(d) COST OF EDUCATION ALLOWANCE FOR GRF PROGRAM.—Section 10 of the National Science Foundation Act of 1950 (42 U.S.C. 1869) is amended—

(1) by inserting ''(a)'' before ''The Foundation is authorized''; and

(2) by adding at the end the following new subsection:

''(b) The Director shall establish for each year the amount to be awarded for scholarships and fellowships under this section for that year. Each such scholarship and fellowship shall include a cost of education allowance of $12,000, subject to any restrictions on the use of cost of education allowance as determined by the Director.''.

SEC. 242. POSTDOCTORAL FELLOWSHIP IN STEM EDUCATION RESEARCH.

(a) IN GENERAL.—The Director shall establish postdoctoral fellowships in STEM education research to provide recent doctoral degree graduates in STEM fields with the necessary skills to assume leadership roles in STEM education research, program development, and evaluation in our Nation's diverse educational institutions.

(b) AWARDS.—

(1) DURATION.—Fellowships may be awarded under this section for a period of up to 24 months in duration, renewable for an additional 12 months. The Director shall establish criteria for eligibility for renewal of the fellowship.

(2) STIPEND.—The Director shall determine the amount of the award for a fellowship, which shall include a stipend and a research allowance, and may include an educational allowance.

(3) LOCATION.—A fellowship shall be awarded for research at any institution of higher education that offers degrees in fields supported by the Foundation, or at any institution or organization that the Director determines is eligible for education research grants from the Foundation.

(4) NUMBER OF AWARDS.—The Director may award up to 20 new fellowships per year.

(c) RESEARCH.—Fellowships under this section shall be awarded for research on STEM education at any educational level, including grades pre-K-12, undergraduate, graduate, and general public education, in both formal and informal settings. Research topics may include—

(1) learning processes and progressions;

(2) knowledge transfer, including curriculum development;

(3) uses of technology as teaching and learning tools;

(4) integrating STEM fields; and

(5) assessment of student learning and program evaluation.

(d) ELIGIBILITY.—To be eligible for a fellowship under this section, an individual must—

(1) be a United States citizen or national, or an alien lawfully admitted to the United States for permanent residence, at the time of application; and

(2) have received a doctoral degree in one of the STEM fields supported by the Foundation within 3 years prior to the fellowship application deadline.

SEC. 243. ROBERT NOYCE TEACHER SCHOLARSHIP PROGRAM.

Section 10A of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n–1a) is amended in subsection (h)(1) by—

(1) striking ''50'' and inserting ''30''; and

(2) striking ''which may be provided in cash or in-kind'' and inserting ''which shall be provided in cash''.

SEC. 244. INSTITUTIONS SERVING PERSONS WITH DISABILITIES.

For the purposes of the activities and programs supported by the Foundation, institutions of higher education chartered to serve large numbers of students with disabilities, including Gallaudet University, Landmark College, and the National Technical Institute for the Deaf, shall have a designation consistent with the designation for other institutions that serve populations underrepresented in STEM to ensure that institutions of higher education chartered to serve persons with disabilities can benefit from STEM bridge programs and from research partnerships with major research universities. Nothing in this section shall be construed to amend or otherwise affect any of the definitions for minority-serving institutions under title III or title V of the Higher Education Act of 1965.

SEC. 245. INSTITUTIONAL INTEGRATION.

(a) INNOVATION THROUGH INSTITUTIONAL INTEGRATION.—The Director shall award grants for the institutional integration of projects funded by the Foundation with a focus on education, or on broadening participation in STEM by underrepresented groups, for the purpose of increasing collaboration and coordination across funded projects and institutions and expanding the impact of such projects within and among institutions of higher education in an innovative and sustainable manner.

(b) PROGRAM ACTIVITIES.—The program under this section shall support integrative activities that involve the strategic and innovative combination of Foundation-funded projects and that provide for—

(1) additional opportunities to increase the recruitment, retention, and degree attainment of underrepresented groups in STEM disciplines;

(2) the inclusion of programming, practices, and policies that encourage the integration of education and research;

(3) seamless transitions from one educational level to another; and

(4) other activities that expand and deepen the impact of Foundation-funded projects with

a focus on education, or on broadening participation in STEM by underrepresented groups, and enhance their sustainability.

(c) REVIEW CRITERIA.—In selecting recipients of grants under this section, the Director shall consider at a minimum—

(1) the extent to which the proposed project addresses the goals of project and program integration and adds value to the existing funded projects;

(2) the extent to which there is a proven record of success for the existing projects on which the proposed integration project is based; and

(3) the extent to which the proposed project addresses the modification of programming, practices, and policies necessary to achieve the purpose described in subsection (a).

(d) PRIORITY.—In selecting recipients of grants under this section, the Director shall give priority to proposals for which a senior institutional administrator, including a dean or other administrator of equal or higher rank, serves as the principal investigator.

SEC. 246. POSTDOCTORAL RESEARCH FELLOWSHIPS.

(a) IN GENERAL.—The Director shall establish a Foundation-wide postdoctoral research fellowship program, to award competitive, merit-based postdoctoral research fellowships in any field of research supported by the Foundation.

(b) DURATION AND AMOUNT.—Fellowships may be awarded under this section for a period of up to 3 years in duration. The Director shall determine the amount of the award for a fellowship, which shall include a stipend and a research allowance, and may include an educational allowance.

(c) ELIGIBILITY.—To be eligible to receive a fellowship under this section, an individual—

(1) must be a United States citizen or national, or an alien lawfully admitted to the United States for permanent residence, at the time of application;

(2) must have received a doctoral degree in any field of research supported by the Foundation within 3 years prior to the fellowship application deadline, or will complete a doctoral degree no more than 1 year after the application deadline; and

(3) may not have previously received funding as the principal investigator of a research grant from the Foundation, unless such funding was received as a graduate student.

(d) PRIORITY.—In evaluating applications for fellowships under this section, the Director shall give priority to applications that include—

(1) proposals for interdisciplinary research; or

(2) proposals for high-risk, high-reward research.

(e) ADDITIONAL CONSIDERATIONS.—In evaluating applications for fellowships under this section, the Director shall give consideration to the goal of promoting the participation of individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b).

(f) NONSUBSTITUTION.—The fellowship program authorized under this section is not intended to replace or reduce support for postdoctoral research through existing programs at the Foundation.

SEC. 247. BROADENING PARTICIPATION TRAINING AND OUTREACH.

The Director shall provide education and training—

(1) to Foundation staff and grant proposal review panels on effective mechanisms and tools for broadening participation in STEM by underrepresented groups, including reviewer selection and mitigation of implicit bias in the review process; and

(2) to Foundation staff on related outreach approaches.

SEC. 248. TRANSFORMING UNDERGRADUATE EDUCATION IN STEM.

Section 17 of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n–6) is amended to read as follows:

"SEC. 17. TRANSFORMING UNDERGRADUATE EDUCATION IN STEM.

''(a) IN GENERAL.—The Director shall award grants, on a competitive, merit-reviewed basis, to institutions of higher education (or to consortia thereof) to reform undergraduate STEM education for the purpose of increasing the number and quality of students studying toward and completing baccalaureate degrees in STEM and improving the STEM learning outcomes for all undergraduate students, including through—

''(1) development, implementation, and assessment of innovative, research-based approaches to transforming the teaching and learning of disciplinary or interdisciplinary STEM at the undergraduate level; and

''(2) expansion of successful STEM reform efforts beyond a single course or group of courses to achieve reform within an entire academic unit, or expansion of successful reform efforts beyond a single academic unit to other STEM academic units within an institution or to comparable academic units at other institutions.

''(b) USES OF FUNDS.—Activities supported by grants under this section may include—

''(1) creation of multidisciplinary or interdisciplinary courses or programs that formalize collaborations for the purpose of improved student instruction and research in STEM;

''(2) expansion of undergraduate STEM research opportunities to include interdisciplinary research opportunities and research opportunities in industry, at Federal labs, and at international research institutions or research sites;

''(3) implementation or expansion of bridge programs, including programs that address student transition from 2-year to 4-year institutions, and cohort, tutoring, or mentoring programs proven to enhance student recruitment or persistence to degree completion in STEM, including recruitment or persistence to degree completion of individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b);

''(4) improvement of undergraduate STEM education for nonmajors, including education majors;

''(5) implementation of evidence-based, technology-driven reform efforts that directly impact undergraduate STEM instruction or research experiences;

''(6) development and implementation of faculty and graduate teaching assistant development programs focused on improved instruction, mentoring, assessment of student learning, and support of undergraduate STEM students;

''(7) support for graduate students and postdoctoral fellows to participate in instructional or assessment activities at primarily undergraduate institutions;

''(8) research on teaching and learning of STEM at the undergraduate level related to the proposed reform effort, including assessment and evaluation of the proposed reform activities, research on scalability and sustainability of approaches to reform, and development and implementation of longitudinal studies of students included in the proposed reform effort; and

''(9) support for initiatives that advance the integration of global challenges such as sustainability into disciplinary and interdisciplinary STEM education.

''(c) PARTNERSHIP.—An institution of higher education may partner with one or more other nonprofit education or research organizations, including scientific and engineering societies, for the purposes of carrying out the activities authorized under this section.

''(d) SELECTION PROCESS.—

''(1) APPLICATIONS.—An institution of higher education seeking a grant under this section shall submit an application to the Director at such time, in such manner, and containing such information as the Director may require. The application shall include, at a minimum—

''(A) a description of the proposed reform effort;

''(B) a description of the research findings that will serve as the basis for the proposed reform effort or, in the case of applications that propose an expansion of a previously implemented reform effort, a description of the previously implemented reform effort, including indicators of success such as data on student recruitment, persistence to degree completion, and academic achievement;

''(C) evidence of institutional support for, and commitment to, the proposed reform effort, including long-term commitment to implement successful strategies from the current reform effort beyond the academic unit or units included in the grant proposal or to disseminate successful strategies to other institutions;

''(D) a description of existing or planned institutional policies and practices regarding faculty hiring, promotion, tenure, and teaching assignment that reward faculty contributions to undergraduate STEM education; and

''(E) a description of the plans for assessment and evaluation of the proposed reform activities, including evidence of participation by individuals with experience in assessment and evaluation of teaching and learning programs.

''(2) REVIEW OF APPLICATIONS.—In selecting grant recipients under this section, the Director shall consider at a minimum—

''(A) the likelihood of success in undertaking the proposed effort at the institution submitting the application, including the extent to which the faculty, staff, and administrators of the institution are committed to making the proposed institutional reform a priority of the participating academic unit or units;

''(B) the degree to which the proposed reform will contribute to change in institutional culture and policy such that a greater value is placed on faculty engagement in undergraduate education;

''(C) the likelihood that the institution will sustain or expand the reform beyond the period of the grant; and

''(D) the degree to which scholarly assessment and evaluation plans are included in the design of the reform effort, including the degree to which such assessment and evaluation contribute to the systematic accumulation of knowledge on STEM education.

''(3) PRIORITY.—For proposals that include an expansion of existing reform efforts beyond a single academic unit, the Director shall give priority to proposals for which a senior institutional administrator, including a dean or other administrator of equal or higher rank, serves as the principal investigator or a coprincipal investigator.

''(4) GRANT DISTRIBUTION.—The Director shall ensure, to the extent practicable, that grants awarded under this section are made to a variety of types of institutions of higher education.''.

SEC. 249. 21ST CENTURY GRADUATE EDUCATION.

(a) IN GENERAL.—The Director shall award grants, on a competitive, merit-reviewed basis, to institutions of higher education to implement or expand research-based reforms in master's and doctoral level STEM education that emphasize preparation for diverse careers utilizing STEM degrees, including at diverse types of institutions of higher education, in industry, and at government agencies and research laboratories.

(b) USES OF FUNDS.—Activities supported by grants under this section may include—

(1) creation of multidisciplinary or interdisciplinary courses or programs for the purpose of improved student instruction and research in STEM;

(2) expansion of graduate STEM research opportunities to include interdisciplinary research opportunities and research opportunities in industry, at Federal laboratories, and at international research institutions or research sites;

(3) development and implementation of future faculty training programs focused on improved

instruction, mentoring, assessment of student learning, and support of undergraduate STEM students;

(4) support and training for graduate students to participate in instructional activities beyond the traditional teaching assistantship, and especially as part of ongoing educational reform efforts, including at pre-K-12 schools, informal science education institutions, and primarily undergraduate institutions;

(5) creation, improvement, or expansion of innovative graduate programs such as science master's degree programs;

(6) development and implementation of seminars, workshops, and other professional development activities that increase the ability of graduate students to engage in innovation, technology transfer, and entrepreneurship;

(7) development and implementation of seminars, workshops, and other professional development activities that increase the ability of graduate students to effectively communicate their research findings to technical audiences outside of their own discipline and to nontechnical audiences;

(8) expansion of successful STEM reform efforts beyond a single academic unit to other STEM academic units within an institution or to comparable academic units at other institutions; and

(9) research on teaching and learning of STEM at the graduate level related to the proposed reform effort, including assessment and evaluation of the proposed reform activities and research on scalability and sustainability of approaches to reform.

(c) PARTNERSHIP.—An institution of higher education may partner with one or more other nonprofit education or research organizations, including scientific and engineering societies, for the purposes of carrying out the activities authorized under this section.

(d) SELECTION PROCESS.—

(1) APPLICATIONS.—An institution of higher education seeking a grant under this section shall submit an application to the Director at such time, in such manner, and containing such information as the Director may require. The application shall include, at a minimum—

(A) a description of the proposed reform effort;

(B) in the case of applications that propose an expansion of a previously implemented reform effort at the applicant's institution or at other institutions, a description of the previously implemented reform effort;

(C) evidence of institutional support for, and commitment to, the proposed reform effort, including long-term commitment to implement successful strategies from the current reform effort beyond the academic unit or units included in the grant proposal or to disseminate successful strategies to other institutions; and

(D) a description of the plans for assessment and evaluation of the grant proposed reform activities.

(2) REVIEW OF APPLICATIONS.—In selecting grant recipients under this section, the Director shall consider at a minimum—

(A) the likelihood of success in undertaking the proposed effort at the institution submitting the application, including the extent to which the faculty, staff, and administrators of the institution are committed to making the proposed institutional reform a priority of the participating academic unit or units;

(B) the degree to which the proposed reform will contribute to change in institutional culture and policy such that a greater value is placed on preparing graduate students for diverse careers utilizing STEM degrees;

(C) the likelihood that the institution will sustain or expand the reform beyond the period of the grant; and

(D) the degree to which scholarly assessment and evaluation plans are included in the design of the reform effort.

(e) REPEAL.—Section 7034 of the America COMPETES Act (42 U.S.C. 1862o–13) is repealed.

SEC. 250. UNDERGRADUATE BROADENING PARTICIPATION PROGRAM.

(a) UNDERGRADUATE BROADENING PARTICIPATION PROGRAM.—The Foundation shall continue to support the Historically Black Colleges and Universities Undergraduate Program, the Louis Stokes Alliances for Minority Participation program, and the Tribal Colleges and Universities Program as separate programs at least through September 30, 2011.

(b) PLAN.—Prior to any realignment or consolidation of the programs described in subsection (a), in addition to the Hispanic-Serving Institutions Undergraduate Program required by section 7033 of the America COMPETES Act (42 U.S.C. 1862o–12), the Director shall develop a plan clarifying the objectives and rationale for such changes. The plan shall include a description of how such changes would result in—

(1) meeting or strengthening the common goal of the separate programs to increase the number of individuals from underrepresented groups attaining undergraduate STEM degrees; and

(2) addressing the unique needs of the different types of minority serving institutions and underrepresented groups currently provided for by the separate programs.

(c) RECOMMENDATIONS.—In the development of the plan required under subsection (b), the Director shall at a minimum—

(1) consider the recommendations and findings of the National Academy of Sciences report required by section 7032 of the America COMPETES Act (Public Law 110–69); and

(2) solicit recommendations and feedback from a wide range of stakeholders, including representatives from minority serving institutions, other institutions of higher education, and other entities with expertise on effective mechanisms to increase the recruitment and retention of members of underrepresented groups in STEM fields, and the attainment of STEM degrees by underrepresented groups.

(d) APPROVAL BY CONGRESS.—The plan developed under this section shall be transmitted to Congress at least 3 months prior to the implementation of any realignment or consolidation of the programs described in subsection (a).

SEC. 251. GRAND CHALLENGES IN EDUCATION RESEARCH.

(a) IN GENERAL.—The Director and the Secretary of Education shall collaborate, in consultation with the Director of the National Institutes of Health, in—

(1) identifying, prioritizing, and developing strategies to address grand challenges in research and development on the teaching and learning of STEM at the pre-K-12 level, in formal and informal settings, for diverse learning populations, including individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b), and students in rural schools;

(2) carrying out research and development to address the grand challenges identified in paragraph (1); and

(3) ensuring the dissemination of the results of such research and development.

(b) STAKEHOLDER INPUT.—In identifying the grand challenges required in subsection (a), the Director and the Secretary shall—

(1) take into consideration critical research gaps identified in existing reports, including reports by the National Academies, on the teaching and learning of STEM at the pre-K-12 level in formal and informal settings; and

(2) solicit input from a wide range of stakeholders, including local and State education officials, STEM teachers, STEM education researchers, scientific and engineering societies, STEM faculty at institutions of higher education, informal STEM education providers, businesses with a large STEM workforce, and other stakeholders in the teaching and learning of STEM at the pre-K-12 level, and may enter into an arrangement with the National Research Council for these purposes.

(c) TOPICS TO CONSIDER.—In identifying the grand challenges required in subsection (a), the Director and the Secretary, in order to provide students with increased access to rigorous courses of study in STEM, increase the number of students who are prepared for advanced study and careers in STEM, and increase the effective teaching of STEM subjects, shall at a minimum consider the following topics:

(1) Research on scalability, sustainability, and replication of successful STEM activities, programs, and models, in formal and informal environments.

(2) Research that utilizes a systems approach to identifying challenges and opportunities to improve the teaching and learning of STEM, including development and evaluation of model systems that support improved teaching and learning of STEM across entire school districts and States, and encompassing and integrating the teaching and learning of STEM in formal and informal venues, and in K-12 schools and institutions of higher education.

(3) Research to understand what makes a STEM teacher effective and STEM teacher professional development effective, including development of tools and methodologies to measure STEM teacher effectiveness.

(4) Research and development on cyber-enabled tools and programs and television based tools and programs for learning and teaching STEM, including development of tools and methodologies for assessing cyber and television enabled teaching and learning.

(5) Research and development on STEM teaching and learning in informal environments, including development of tools and methodologies for assessing STEM teaching and learning in informal environments.

(6) Research and development on how integrating engineering with mathematics and science education may—

(A) improve student learning of mathematics and science;

(B) increase student interest and persistence in STEM; or

(C) improve student understanding of engineering design principles and of the built world.

(7) Research to understand what makes hands-on, inquiry-based classroom experiences effective, including development of tools and methodologies for assessing such experiences.

(d) REPORT TO CONGRESS.—Not later than 18 months after the date of enactment of this Act, the Director and the Secretary shall report back to Congress with a description of—

(1) the grand challenges identified pursuant to this section;

(2) the role of each agency in supporting research and development activities to address the grand challenges;

(3) the common metrics that will be used to assess progress toward meeting the grand challenges;

(4) plans for periodically updating the grand challenges;

(5) how the agencies will disseminate the results of research and development activities carried out under this section to STEM education practitioners, to other Federal agencies that support STEM programs and activities, and to non-Federal funders of STEM education; and

(6) how the agencies will support implementation of best practices identified by the research and development activities.

SEC. 252. RESEARCH EXPERIENCES FOR UNDERGRADUATES.

(a) RESEARCH SITES.—The Director shall award grants, on a merit-reviewed, competitive basis, to institutions of higher education, nonprofit organizations, or consortia of such institutions and organizations, for sites designated by the Director to provide research experiences for 10 or more undergraduate STEM students, with consideration given to the goal of promoting the participation of individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b). The Director shall ensure that—

(1) at least half of the students participating in a program funded by a grant under this subsection at each site shall be recruited from institutions of higher education where research opportunities in STEM are limited, including 2-year institutions;

(2) the awards provide undergraduate research experiences in a wide range of STEM disciplines;

(3) the awards support a variety of projects, including independent investigator-led projects, interdisciplinary projects, and multi-institutional projects (including virtual projects);

(4) students participating in each program funded have mentors, including during the academic year to the extent practicable, to help connect the students' research experiences to the overall academic course of study and to help students achieve success in courses of study leading to a baccalaureate degree in a STEM field;

(5) mentors and students are supported with appropriate salary or stipends; and

(6) student participants are tracked, for employment and continued matriculation in STEM fields, through receipt of the undergraduate degree and for at least 3 years thereafter.

(b) INCLUSION OF UNDERGRADUATES IN STANDARD RESEARCH GRANTS.—The Director shall require that every recipient of a research grant from the Foundation proposing to include 1 or more undergraduate students in carrying out the research under the grant shall request support, including stipend support, for such undergraduate students as part of the research proposal itself rather than as a supplement to the research proposal, unless such undergraduate participation was not foreseeable at the time of the original proposal.

SEC. 253. LABORATORY SCIENCE PILOT PROGRAM.

Section 7026 of the America COMPETES Act (Public Law 110–69) is amended by striking subsections (d) and (e).

SEC. 254. STEM INDUSTRY INTERNSHIP PROGRAMS.

(a) IN GENERAL.—The Director may award grants, on a competitive, merit-reviewed basis, to institutions of higher education, or consortia thereof, to establish or expand partnerships with local or regional private sector entities, for the purpose of providing undergraduate students with integrated internship experiences that connect private sector internship experiences with the students' STEM coursework. Such partnerships may also include industry or professional associations.

(b) PRIORITY.—In awarding grants under this section, the Director shall give priority to institutions of higher education or consortia thereof that demonstrate significant outreach to and coordination with local or regional private sector entities in developing academic courses designed to provide students with the skills necessary for employment in local or regional companies.

(c) COST-SHARE.—The Director shall require a 50 percent non-Federal cost-share from partnerships established or expanded under this section.

(d) RESTRICTION.—No Federal funds provided under this section may be used—

(1) for the purpose of providing stipends or compensation to students for private sector internships; or

(2) as payment or reimbursement to private sector entities.

(e) REPORT.—Not less than 3 years after the date of enactment of this Act, the Director shall submit a report to Congress on the number and total value of awards made under this section, the number of students affected by those awards, and any evidence of the effect of those awards on workforce preparation and jobs placement for participating students.

SEC. 255. TRIBAL COLLEGES AND UNIVERSITIES PROGRAM.

(a) IN GENERAL.—The Director shall continue to support a program to award grants on a competitive, merit-reviewed basis to tribal colleges and universities (as defined in section 316 of the Higher Education Act of 1965 (20 U.S.C. 1059c)), including institutions described in section 317 of such Act (20 U.S.C. 1059d), to enhance the quality of undergraduate STEM education at such institutions and to increase the retention and graduation rates of Native American students pursuing associate's or baccalaureate degrees in STEM.

(b) PROGRAM COMPONENTS.—Grants awarded under this section shall support—

(1) activities to improve courses and curriculum in STEM;

(2) faculty development;

(3) stipends for undergraduate students participating in research; and

(4) other activities consistent with subsection (a), as determined by the Director.

(c) INSTRUMENTATION.—Funding provided under this section may be used for instrumentation.

TITLE III—STEM EDUCATION

SEC. 301. COORDINATION OF FEDERAL STEM EDUCATION.

(a) SHORT TITLE.—This section may be cited as the ''STEM Education Coordination Act of 2010''.

(b) DEFINITION.—In this section, the term ''STEM'' means science, technology, engineering, and mathematics.

(c) ESTABLISHMENT.—The Director of the Office of Science and Technology Policy shall establish a committee under the National Science and Technology Council with the responsibility to coordinate Federal programs and activities in support of STEM education, including at the National Science Foundation, the Department of Energy, the National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration, the Department of Education, and all other Federal agencies that have programs and activities in support of STEM education.

(d) RESPONSIBILITIES OF THE COMMITTEE.—The committee established under subsection (c) shall—

(1) coordinate the STEM education activities and programs of the Federal agencies;

(2) develop, implement through the participating agencies, and update once every 5 years a 5-year STEM education strategic plan, which shall—

(A) specify and prioritize annual and long-term objectives;

(B) specify the common metrics that will be used to assess progress toward achieving the objectives;

(C) describe the approaches that will be taken by each participating agency to assess the effectiveness of its STEM education programs and activities; and

(D) with respect to subparagraph (A), describe the role of each agency in supporting programs and activities designed to achieve the objectives; and

(3) establish, periodically update, and maintain an inventory of federally sponsored STEM education programs and activities, including documentation of assessments of the effectiveness of such programs and activities and rates of participation by underrepresented minorities in such programs and activities.

(e) RESPONSIBILITIES OF OSTP.—The Director of the Office of Science and Technology Policy shall encourage and monitor the efforts of the participating agencies to ensure that the strategic plan under subsection (d)(2) is developed and executed effectively and that the objectives of the strategic plan are met.

(f) REPORT.—The Director of the Office of Science and Technology Policy shall transmit a report annually to Congress at the time of the President's budget request describing the plan required under subsection (d)(2). The annual report shall include—

(1) a description of the STEM education programs and activities for the previous and current fiscal years, and the proposed programs and activities under the President's budget request, of each participating Federal agency;

(2) the levels of funding for each participating Federal agency for the programs and activities described under paragraph (1) for the previous fiscal year and under the President's budget request;

(3) except for the initial annual report, a description of the progress made in carrying out the implementation plan, including a description of the outcome of any program assessments completed in the previous year, and any changes made to that plan since the previous annual report; and

(4) a description of how the participating Federal agencies will disseminate information about federally supported resources for STEM education practitioners, including teacher professional development programs, to States and to STEM education practitioners, including to teachers and administrators in high-need schools, as defined in section 200 of the Higher Education Act of 1965 (20 U.S.C. 1021).

SEC. 302. ADVISORY COMMITTEE ON STEM EDUCATION.

(a) IN GENERAL.—The President shall establish or designate an advisory committee on science, technology, engineering, and mathematics (STEM) education.

(b) MEMBERSHIP.—The advisory committee established or designated by the President under subsection (a) shall be chaired by at least 2 members of the President's Council of Advisors on Science and Technology, with the remaining advisory committee membership consisting of non-Federal members who are specially qualified to provide the President with advice and information on STEM education. Membership of the advisory committee, at a minimum, shall include individuals from the following categories of individuals and organizations:

(1) STEM educator professional associations.

(2) Organizations that provide informal STEM education activities.

(3) Institutions of higher education.

(4) Scientific and engineering professional societies.

(5) Business and industry associations.

(6) Foundations that fund STEM education activities.

(c) RESPONSIBILITIES.—The responsibilities of the advisory committee shall include—

(1) soliciting input from teachers, administrators, local education agencies, States, and other public and private STEM education stakeholder groups for the purpose of informing the Federal agencies that support STEM education programs on the STEM education needs of States and school districts;

(2) soliciting input from all STEM education stakeholder groups regarding STEM education programs, including STEM education research programs, supported by Federal agencies;

(3) providing advice to the Federal agencies that support STEM education programs on how their programs can be better aligned with the needs of States and school districts as identified in paragraph (1), consistent with the mission of each agency; and

(4) offering guidance to the President on current STEM education activities, research findings, and best practices, with the purpose of increasing connectivity between public and private STEM education efforts.

SEC. 303. STEM EDUCATION AT THE DEPARTMENT OF ENERGY.

(a) DEFINITIONS.—Section 5002 of the America COMPETES Act (42 U.S.C. 16531) is amended—

(1) by redesignating paragraphs (2) through (4) as paragraphs (3) through (5), respectively; and

(2) by inserting after paragraph (1) the following new paragraph:

''(2) ENERGY SYSTEMS SCIENCE AND ENGINEERING.—The term 'energy systems science and engineering' means—

''(A) nuclear science and engineering, including—

''(i) nuclear engineering;

''(ii) nuclear chemistry;

''(iii) radiochemistry; and

''(iv) health physics;

''(B) hydrocarbon system science and engineering, including—

''(i) petroleum or reservoir engineering;

''(ii) environmental geoscience;

''(iii) petrophysics;

''(iv) geophysics;

''(v) geochemistry;

''(vi) petroleum geology;

''(vii) ocean engineering;

''(viii) environmental engineering; and

''(ix) carbon capture and sequestration science and engineering;

''(C) energy efficiency and renewable energy technology systems science and engineering, including with respect to—

''(i) solar technology systems;

''(ii) wind technology systems;

''(iii) buildings technology systems;

''(iv) transportation technology systems;

''(v) hydropower systems; and

''(vi) geothermal systems; and

''(D) energy storage and distribution systems science and engineering, including with respect to—

''(i) energy storage; and

''(ii) energy delivery.''.

(b) SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS EDUCATION PROGRAMS.—Subpart B of the Department of Energy Science Education Enhancement Act (42 U.S.C. 7381g et seq.) is amended—

(1) in section 3170—

(A) by amending paragraph (1) to read as follows:

''(1) DIRECTOR.—The term 'Director' means the Director of STEM Education appointed or designated under section 3171(c)(1).'';

(B) by redesignating paragraph (2) as paragraph (3);

(C) by inserting after paragraph (1) the following new paragraph:

''(2) ENERGY SYSTEMS SCIENCE AND ENGINEERING.—The term 'energy systems science and engineering' means—

''(A) nuclear science and engineering, including—

''(i) nuclear engineering;

''(ii) nuclear chemistry;

''(iii) radiochemistry; and

''(iv) health physics;

''(B) hydrocarbon system science and engineering, including—

''(i) petroleum or reservoir engineering;

''(ii) environmental geoscience;

''(iii) petrophysics;

''(iv) geophysics;

''(v) geochemistry;

''(vi) petroleum geology;

''(vii) ocean engineering; and

''(viii) environmental engineering;

''(C) energy efficiency and renewable energy technology systems science and engineering, including with respect to—

''(i) solar technology systems;

''(ii) wind technology systems;

''(iii) buildings technology systems;

''(iv) transportation technology systems;

''(v) hydropower systems; and

''(vi) geothermal systems; and

''(D) energy storage and distribution systems science and engineering, including with respect to—

''(i) energy storage; and

''(ii) energy delivery.''; and

(D) by adding at the end the following new paragraph:

''(4) STEM.—The term 'STEM' means science, technology, engineering, and mathematics.'';

(2) by striking chapters 1, 2, 3, 4, and 6;

(3) by inserting after section 3170 the following new chapter:

"CHAPTER 1—STEM EDUCATION

"SEC. 3171. STEM EDUCATION.

''(a) IN GENERAL.—The Secretary of Energy shall develop, conduct, support, promote, and coordinate formal and informal educational activities that leverage the Department's unique content expertise and facilities to contribute to improving STEM education at all levels in the United States, and to enhance awareness and understanding of STEM, including energy sciences, in order to create a diverse skilled scientific and technical workforce essential to meeting the challenges facing the Department and the Nation in the 21st century.

''(b) PROGRAMS.—The Secretary shall carry out evidence-based programs designed to increase student interest and participation, improve public literacy and support, and improve the teaching and learning of energy systems science and engineering and other STEM disciplines supported by the Department. Programs authorized under this subsection may include—

''(1) informal educational programming designed to excite and inspire students and the general public about energy systems science and engineering and other STEM disciplines supported by the Department, while strengthening their content knowledge in these fields;

''(2) teacher training and professional development opportunities for pre-service and in-service elementary and secondary teachers designed to increase the content knowledge of teachers in energy systems science and engineering and other STEM disciplines supported by the Department, including through hands-on research experiences;

''(3) research opportunities for secondary school students, including internships at the National Laboratories, that provide secondary school students with hands-on research experiences as well as exposure to working scientists;

''(4) research opportunities at the National Laboratories for undergraduate and graduate students pursuing degrees in energy systems science and engineering and other STEM disciplines supported by the Department; and

''(5) competitive scholarships, fellowships, and traineeships for undergraduate and graduate students in energy systems science and engineering and other STEM disciplines supported by the Department.

''(c) ORGANIZATION OF STEM EDUCATION PROGRAMS.—

''(1) DIRECTOR OF STEM EDUCATION.—The Secretary shall appoint or designate a Director of STEM Education, who shall have the principal responsibility to oversee and coordinate all programs and activities of the Department in support of STEM education, including energy systems science and engineering education, across all functions of the Department.

''(2) QUALIFICATIONS.—The Director shall be an individual, who by reason of professional background and experience, is specially qualified to advise the Secretary on all matters pertaining to STEM education, including energy systems science and engineering education, at the Department.

''(3) DUTIES.—The Director shall—

''(A) oversee and coordinate all programs in support of STEM education, including energy systems science and engineering education, across all functions of the Department;

''(B) represent the Department as the principal interagency liaison for all STEM education programs, unless otherwise represented by the Secretary, the Under Secretary for Science, or the Under Secretary for Energy;

''(C) prepare the annual budget and advise the Under Secretary for Science and the Under Secretary for Energy on all budgetary issues for STEM education, including energy systems science and engineering education, relative to the programs of the Department;

''(D) establish, periodically update, and maintain a publicly accessible online inventory of STEM education programs and activities, including energy systems science and engineering education programs and activities;

''(E) develop, implement, and update the Department of Energy STEM education strategic plan, as required by subsection (d);

''(F) increase, to the maximum extent practicable, the participation and advancement of women and underrepresented minorities at every level of STEM education, including energy systems science and engineering education; and

''(G) perform such other matters relating to STEM education as are required by the Secretary, the Under Secretary for Science, or the Under Secretary for Energy.

''(d) DEPARTMENT OF ENERGY STEM EDUCATION STRATEGIC PLAN.—The Director of STEM education appointed or designated under subsection (c)(1) shall develop, implement, and update once every 3 years a 3-year STEM education strategic plan for the Department, which shall—

''(1) identify and prioritize annual and long-term STEM education goals and objectives for the Department that are aligned with the overall goals of the National Science and Technology Council Committee on STEM Education Strategic plan required under section 301(d)(2) of the STEM Education Coordination Act of 2010;

''(2) describe the role of each program or activity of the Department in contributing to the goals and objectives identified under paragraph (1);

''(3) specify the metrics that will be used to assess progress toward achieving those goals and objectives; and

''(4) describe the approaches that will be taken to assess the effectiveness of each STEM education program and activity supported by the Department.

''(e) OUTREACH TO STUDENTS FROM UNDER-REPRESENTED GROUPS.—In carrying out a program authorized under this section, the Secretary shall give consideration to the goal of promoting the participation of individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b).

''(f) CONSULTATION AND PARTNERSHIP WITH OTHER AGENCIES.—In carrying out the programs and activities authorized under this section, the Secretary shall—

''(1) consult with the Secretary of Education and the Director of the National Science Foundation regarding activities designed to improve elementary and secondary STEM education; and

''(2) consult and partner with the Director of the National Science Foundation in carrying out programs under this section designed to build capacity in STEM education at the undergraduate and graduate level, including by supporting excellent proposals in energy systems science and engineering that are submitted for funding to the Foundation's Advanced Technological Education Program.''; and

(4) in section 3191—

(A) in subsection (a)—

(i) by striking ''web-based'' and inserting '', through a publicly available website,'' ; and

(ii) by inserting ''and project-based learning opportunities'' after ''laboratory experiments'';

(B) in subsection (b)(1), by inserting '', including energy systems science and engineering'' after ''the science of energy''; and

(C) by striking subsection (d).

(c) ENERGY APPLIED SCIENCE TALENT EXPANSION PROGRAM FOR INSTITUTIONS OF HIGHER EDUCATION.—

(1) AMENDMENT.—Strike sections 5004 and 5005 of the America COMPETES Act (42 U.S.C. 16532 and 16533) and insert the following new section:

"SEC. 5004. ENERGY APPLIED SCIENCE TALENT EXPANSION PROGRAM FOR INSTITUTIONS OF HIGHER EDUCATION.

''(a) PURPOSES.—The purposes of this section are—

''(1) to address the decline in the number of and resources available to energy systems science and engineering programs at institutions of higher education, including community colleges; and

''(2) to increase the number of graduates with degrees in energy systems science and engineering, an area of strategic importance to the economic competitiveness and energy security of the United States.

''(b) ESTABLISHMENT.—The Secretary shall award grants, on a competitive, merit-reviewed basis, to institutions of higher education to implement or expand the energy systems science and engineering educational and technical training capabilities of the institution, and to provide merit-based financial support for master's and doctoral level students pursuing courses of study and research in energy systems sciences and engineering.

''(c) USE OF FUNDS.—An institution of higher education that receives a grant under this section may use the grant to—

''(1) provide traineeships, including stipends and cost of education allowances, to master's and doctoral students;

''(2) develop or expand multidisciplinary or interdisciplinary courses or programs;

''(3) recruit and retain new faculty;

''(4) develop or improve core and specialized course content;

''(5) encourage interdisciplinary and multidisciplinary research collaborations;

''(6) support outreach efforts to recruit students, including individuals identified in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b); and

''(7) pursue opportunities for collaboration with industry and National Laboratories.

''(d) CRITERIA.—Criteria for awarding a grant under this section shall be based on—

''(1) the potential to attract new students to the program;

''(2) academic rigor; and

''(3) the ability to offer hands-on education and training opportunities for graduate students in the emerging areas of energy systems science and engineering.

''(e) PRIORITY.—The Secretary shall give priority to proposals that involve active partnerships with a National Laboratory or other energy systems science and engineering related entity, as determined by the Secretary.

''(f) DURATION AND AMOUNT.—

''(1) DURATION.—A grant under this section may be for up to 5 years in duration.

''(2) AMOUNT.—An institution of higher education that receives a grant under this section shall be eligible for up to $1,000,000 for each year of the grant period.

''(g) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out this section—

''(1) $30,000,000 for fiscal year 2011;

''(2) $32,000,000 for fiscal year 2012;

''(3) $36,000,000 for fiscal year 2013;

''(4) $38,000,000 for fiscal year 2014; and

''(5) $40,000,000 for fiscal year 2015.''.

(2) CONFORMING AMENDMENT.—The table of contents for the America COMPETES Act is amended by striking the items relating to sections 5004 and 5005 and inserting the following:

Sec. 5004. Energy applied science talent expansion program for institutions of higher education.

(d) DEPARTMENT OF ENERGY EARLY CAREER AWARDS FOR SCIENCE, ENGINEERING, AND MATHEMATICS RESEARCHERS.—Section 5006 of the America COMPETES Act (42 U.S.C. 16534) is amended—

(1) in subsection (a), by striking ''Director of the Office'' and all that follows through ''shall carry'' and inserting ''Secretary shall carry'';

(2) in subsection (b)(1)—

(A) in subparagraph (A), by inserting ''per year'' after ''$80,000''; and

(B) in subparagraph (B), by striking ''$125,000'' and inserting ''$175,000 per year'';

(3) in subsection (c)(1), by striking '', as determined by the Director'';

(4) in subsections (c)(2), (e), (f), and (g), by striking ''Director'' each place it appears and inserting ''Secretary'';

(5) in subsection (d), by striking ''merit-reviewed'' and inserting ''merit-based, peer reviewed''; and

(6) in subsection (h)—

(A) by striking '', acting through the Director,''; and

(B) by striking ''$25,000,000 for each of fiscal years 2008 through 2010'' and inserting ''such sums as are necessary''.

(e) PROTECTING AMERICA'S COMPETITIVE EDGE (PACE) GRADUATE FELLOWSHIP PROGRAM.—Section 5009 of the America COMPETES Act (42 U.S.C. 16536) is amended—

(1) in subsection (c)—

(A) in paragraph (1), by striking ''involving written and oral interviews, that will result in a wide distribution of awards throughout the United States,''; and

(B) in paragraph (2)(B)(iv), by striking ''verbal and'';

(2) in subsection (d)(1)(B)(i), by inserting ''partial or full'' before ''graduate tuition''; and

(3) by striking subsection (f).

(f) REPEAL.—Section 3164 of the Department of Energy Science Education Enhancement Act (42 U.S.C. 7381a) is repealed.

SEC. 304. GREEN ENERGY EDUCATION.

(a) SHORT TITLE.—This section may be cited as the ''Green Energy Education Act of 2010''.

(b) DEFINITION.—For the purposes of this section:

(1) DIRECTOR.—The term ''Director'' means the Director of the National Science Foundation.

(2) HIGH PERFORMANCE BUILDING.—The term ''high performance building'' has the meaning given that term in section 914(a) of the Energy Policy Act of 2005 (42 U.S.C. 16194(a)).

(c) GRADUATE TRAINING IN ENERGY RESEARCH AND DEVELOPMENT.—

(1) FUNDING.—In carrying out research, development, demonstration, and commercial application activities authorized for the Department of Energy, the Secretary may contribute funds to the National Science Foundation for the Integrative Graduate Education and Research Traineeship program to support projects that enable graduate education related to such activities.

(2) CONSULTATION.—The Director shall consult with the Secretary when preparing solicitations and awarding grants for projects described in paragraph (1).

(d) CURRICULUM DEVELOPMENT FOR HIGH PERFORMANCE BUILDING DESIGN.—

(1) FUNDING.—In carrying out advanced energy technology research, development, demonstration, and commercial application activities authorized for the Department of Energy related to high performance buildings, the Secretary may contribute funds to curriculum development activities at the National Science Foundation for the purpose of improving undergraduate or graduate interdisciplinary engineering and architecture education related to the design and construction of high performance buildings, including development of curricula, of laboratory activities, of training practicums, or of design projects. A primary goal of curriculum development activities supported under this subsection shall be to improve the ability of engineers, architects, landscape architects, and planners to work together on the incorporation of advanced energy technologies during the design and construction of high performance buildings.

(2) CONSULTATION.—The Director shall consult with the Secretary when preparing solicitations and awarding grants for projects described in paragraph (1).

(3) PRIORITY.—In awarding grants with respect to which the Secretary has contributed funds under this subsection, the Director shall give priority to applications from departments, programs, or centers of a school of engineering that are partnered with schools, departments, or programs of design, architecture, landscape architecture, and city, regional, or urban planning.

TITLE IV—NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

SEC. 401. SHORT TITLE.

This title may be cited as the ''National Institute of Standards and Technology Authorization Act of 2010''.

SEC. 402. AUTHORIZATION OF APPROPRIATIONS.

(a) FISCAL YEAR 2011.—

(1) IN GENERAL.—There are authorized to be appropriated to the Secretary of Commerce $991,100,000 for the National Institute of Standards and Technology for fiscal year 2011.

(2) SPECIFIC ALLOCATIONS.—Of the amount authorized under paragraph (1)—

(A) $620,000,000 shall be authorized for scientific and technical research and services laboratory activities;

(B) $125,000,000 shall be authorized for the construction and maintenance of facilities; and

(C) $246,100,000 shall be authorized for industrial technology services activities, of which—

(i) $95,000,000 shall be authorized for the Technology Innovation Program under section 28 of the National Institute of Standards and Technology Act (15 U.S.C. 278n);

(ii) $141,100,000 shall be authorized for the Manufacturing Extension Partnership program under sections 25 and 26 of such Act (15 U.S.C. 278k and 278l); and

(iii) $10,000,000 shall be authorized for the Malcolm Baldrige National Quality Award program under section 17 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3711a).

(b) FISCAL YEAR 2012.—

(1) IN GENERAL.—There are authorized to be appropriated to the Secretary of Commerce $992,400,000 for the National Institute of Standards and Technology for fiscal year 2012.

(2) SPECIFIC ALLOCATIONS.—Of the amount authorized under paragraph (1)—

(A) $657,200,000 shall be authorized for scientific and technical research and services laboratory activities;

(B) $85,000,000 shall be authorized for the construction and maintenance of facilities; and

(C) $250,200,000 shall be authorized for industrial technology services activities, of which—

(i) $89,000,000 shall be authorized for the Technology Innovation Program under section 28 of the National Institute of Standards and Technology Act (15 U.S.C. 278n);

(ii) $150,900,000 shall be authorized for the Manufacturing Extension Partnership program under sections 25 and 26 of such Act (15 U.S.C. 278k and 278l); and

(iii) $10,300,000 shall be authorized for the Malcolm Baldrige National Quality Award program under section 17 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3711a).

(c) FISCAL YEAR 2013.—

(1) IN GENERAL.—There are authorized to be appropriated to the Secretary of Commerce $1,079,809,000 for the National Institute of Standards and Technology for fiscal year 2013.

(2) SPECIFIC ALLOCATIONS.—Of the amount authorized under paragraph (1)—

(A) $696,700,000 shall be authorized for scientific and technical research and services laboratory activities;

(B) $122,000,000 shall be authorized for the construction and maintenance of facilities; and

(C) $261,109,000 shall be authorized for industrial technology services activities, of which—

(i) $89,000,000 shall be authorized for the Technology Innovation Program under section 28 of the National Institute of Standards and Technology Act (15 U.S.C. 278n);

(ii) $161,500,000 shall be authorized for the Manufacturing Extension Partnership program under sections 25 and 26 of such Act (15 U.S.C. 278k and 278l); and

(iii) $10,609,000 shall be authorized for the Malcolm Baldrige National Quality Award program under section 17 of the Stevenson-Wydler

Technology Innovation Act of 1980 (15 U.S.C. 3711a).

(d) FISCAL YEAR 2014.—

(1) IN GENERAL.—There are authorized to be appropriated to the Secretary of Commerce $1,126,227,000 for the National Institute of Standards and Technology for fiscal year 2014.

(2) SPECIFIC ALLOCATIONS.—Of the amount authorized under paragraph (1)—

(A) $738,500,000 shall be authorized for scientific and technical research and services laboratory activities;

(B) $124,000,000 shall be authorized for the construction and maintenance of facilities; and

(C) $263,727,000 shall be authorized for industrial technology services activities, of which—

(i) $80,000,000 shall be authorized for the Technology Innovation Program under section 28 of the National Institute of Standards and Technology Act (15 U.S.C. 278n);

(ii) $172,800,000 shall be authorized for the Manufacturing Extension Partnership program under sections 25 and 26 of such Act (15 U.S.C. 278k and 278l); and

(iii) $10,927,000 shall be authorized for the Malcolm Baldrige National Quality Award program under section 17 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3711a).

(e) FISCAL YEAR 2015.—

(1) IN GENERAL.—There are authorized to be appropriated to the Secretary of Commerce $1,191,955,000 for the National Institute of Standards and Technology for fiscal year 2015.

(2) SPECIFIC ALLOCATIONS.—Of the amount authorized under paragraph (1)—

(A) $782,800,000 shall be authorized for scientific and technical research and services laboratory activities;

(B) $133,000,000 shall be authorized for the construction and maintenance of facilities; and

(C) $276,155,000 shall be authorized for industrial technology services activities, of which—

(i) $80,000,000 shall be authorized for the Technology Innovation Program under section 28 of the National Institute of Standards and Technology Act (15 U.S.C. 278n);

(ii) $184,900,000 shall be authorized for the Manufacturing Extension Partnership program under sections 25 and 26 of such Act (15 U.S.C. 278k and 278l); and

(iii) $11,255,000 shall be authorized for the Malcolm Baldrige National Quality Award program under section 17 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3711a).

SEC. 403. UNDER SECRETARY OF COMMERCE FOR STANDARDS AND TECHNOLOGY.

(a) ESTABLISHMENT.—Section 4 of the National Institute of Standards and Technology Act is amended to read as follows:

"SEC. 4. UNDER SECRETARY OF COMMERCE FOR STANDARDS AND TECHNOLOGY.

''(a) ESTABLISHMENT.—There shall be in the Department of Commerce an Under Secretary of Commerce for Standards and Technology (in this section referred to as the 'Under Secretary').

''(b) APPOINTMENT.—The Under Secretary shall be appointed by the President by and with the advice and consent of the Senate.

''(c) COMPENSATION.—The Under Secretary shall be compensated at the rate in effect for level III of the Executive Schedule under section 5314 of title 5, United States Code.

''(d) DUTIES.—The Under Secretary shall serve as the Director of the Institute and shall perform such duties as required of the Director by the Secretary under this Act or by law.

''(e) APPLICABILITY.—The individual serving as the Director of the Institute on the date of enactment of the National Institute of Standards and Technology Authorization Act of 2010 shall also serve as the Under Secretary until such time as a successor is appointed under subsection (b).''.

(b) CONFORMING AMENDMENTS.—

(1) TITLE 5, UNITED STATES CODE.—

(A) LEVEL III.—Section 5314 of title 5, United States Code, is amended by inserting before the item ''Associate Attorney General'' the following:

''Under Secretary of Commerce for Standards and Technology, who also serves as Director of the National Institute of Standards and Technology.''.

(B) LEVEL IV.—Section 5315 of title 5, United States Code, is amended by striking ''Director, National Institute of Standards and Technology, Department of Commerce.''.

(2) NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY ACT.—Section 5 of the National Institute of Standards and Technology Act (15 U.S.C. 274) is amended by striking the first, fifth, and sixth sentences.

SEC. 404. REORGANIZATION OF NIST LABORATORIES.

(a) ORGANIZATION.—The Director shall reorganize the scientific and technical research and services laboratory program into the following operational units:

(1) The Physical Measurement Laboratory, whose mission is to realize and disseminate the national standards for length, mass, time and frequency, electricity, temperature, force, and radiation by activities including fundamental research in measurement science, the provision of measurement services and standards, and the provision of testing facilities resources for use by the Federal Government.

(2) The Information Technology Laboratory, whose mission is to develop and disseminate standards, measurements, and testing capabilities for interoperability, security, usability, and reliability of information technologies, including cyber security standards and guidelines for Federal agencies, United States industry, and the public, through fundamental and applied research in computer science, mathematics, and statistics.

(3) The Engineering Laboratory, whose mission is to develop and disseminate advanced manufacturing and construction technologies to the United States manufacturing and construction industries through activities including measurement science research, performance metrics, tools for engineering applications, and promotion of standards adoption.

(4) The Material Measurement Laboratory, whose mission is to serve as the national reference laboratory in biological, chemical, and material sciences and engineering through activities including fundamental research in the composition, structure, and properties of biological and environmental materials and processes, the development of certified reference materials and critically evaluated data, and other programs to assure measurement quality in materials and biotechnology fields.

(5) The Center for Nanoscale Science and Technology, a national shared-use facility for nanoscale fabrication and measurement, whose mission is to develop innovative nanoscale measurement and fabrication capabilities to support researchers from industry, institutions of higher education, the National Institute of Standards and Technology, and other Federal agencies in nanoscale technology from discovery to production.

(6) The NIST Center for Neutron Research, a national user facility, whose mission is to provide neutron-based measurement capabilities to researchers from industry, institutions of higher education, the National Institute of Standards and Technology, and other Federal agencies in support of materials research, nondestructive evaluation, neutron imaging, chemical analysis, neutron standards, dosimetry, and radiation metrology.

(b) ADDITIONAL DUTIES.—The Director may assign additional duties to the operational units listed in subsection (a) that are consistent with the missions of such units.

(c) REVISION.—

(1) IN GENERAL.—Subsequent to the reorganization required under subsection (a), the Director may revise the organization of the scientific and technical research and services laboratory program.

(2) REPORT TO CONGRESS.—Any revision to the organization of such program under paragraph (1) shall be submitted in a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate at least 60 days before the effective date of such revision.

SEC. 405. FEDERAL GOVERNMENT STANDARDS AND CONFORMITY ASSESSMENT COORDINATION.

(a) COORDINATION.—Section 2(b) of the National Institute of Standards and Technology Act (15 U.S.C. 272(b)) is amended—

(1) in paragraph (12), by striking ''and'' after the semicolon;

(2) in paragraph (13), by striking the period at the end and inserting a semicolon; and

(3) by adding after paragraph (13) the following:

''(14) to promote collaboration among Federal departments and agencies and private sector stakeholders in the development and implementation of standards and conformity assessment frameworks to address specific Federal Government policy goals; and

''(15) to convene Federal departments and agencies, as appropriate, to—

''(A) coordinate and determine Federal Government positions on specific policy issues related to the development of international technical standards and conformity assessment-related activities; and

''(B) coordinate Federal department and agency engagement in the development of international technical standards and conformity assessment-related activities.''.

(b) REPORT.—The Director, in consultation with appropriate Federal agencies, shall submit a report annually to Congress addressing the Federal Government's technical standards and conformity assessment-related activities. The report shall identify—

(1) current and anticipated international standards and conformity assessment-related issues that have the potential to impact the competitiveness and innovation capabilities of the United States;

(2) any action being taken by the Federal Government to address these issues and the Federal agency taking that action; and

(3) any action that the Director is taking or will take to ensure effective Federal Government engagement on technical standards and conformity assessment-related issues, as appropriate, where the Federal Government is not effectively engaged.

SEC. 406. MANUFACTURING EXTENSION PARTNERSHIP.

(a) COMMUNITY COLLEGE SUPPORT.—Section 25(a) of the National Institute of Standards and Technology Act (15 U.S.C. 278k(a)) is amended—

(1) in paragraph (4), by striking ''and'' after the semicolon;

(2) in paragraph (5), by striking the period at the end and inserting ''; and''; and

(3) by adding after paragraph (5) the following:

''(6) providing to community colleges information about the job skills needed in small- and medium-sized manufacturing businesses in the regions they serve.''.

(b) INNOVATIVE SERVICES INITIATIVE.—Section 25 of such Act (15 U.S.C. 278k) is amended by adding at the end the following:

''(g) INNOVATIVE SERVICES INITIATIVE.—

''(1) ESTABLISHMENT.—The Director may establish, within the Centers program under this section, an innovative services initiative to assist small- and medium-sized manufacturers in—

''(A) reducing their energy usage and environmental waste to improve profitability; and

''(B) accelerating the domestic commercialization of new product technologies, including components for renewable energy systems.

''(2) MARKET DEMAND.—The Director may not undertake any activity to accelerate the domestic commercialization of a new product technology under this subsection unless an analysis of market demand for the new product technology has been conducted.''.

(c) REPORTS.—Section 25 of such Act (15 U.S.C. 278k) is further amended by adding after subsection (g), as added by subsection (b), the following:

''(h) REPORTS.—

''(1) IN GENERAL.—In submitting the 3-year programmatic planning document and annual updates under section 23, the Director shall include an assessment of the Director's governance of the program established under this section.

''(2) CRITERIA.—In conducting such assessment, the Director shall use the criteria established pursuant to the Malcolm Baldrige National Quality Award under section 17(d)(1)(C) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3711a(d)(1)(C)).''.

(d) HOLLINGS MANUFACTURING EXTENSION PARTNERSHIP PROGRAM COST-SHARING.—Section 25(c) of such Act (15 U.S.C. 278k(c)) is amended by adding at the end the following:

''(7) Notwithstanding paragraphs (1), (3), and (5), for fiscal year 2011 through fiscal year 2015, the Secretary may not provide to a Center more than 50 percent of the costs incurred by such Center and may not require that a Center's cost share exceed 50 percent.

''(8) Not later than 4 years after the date of enactment of the National Institute of Standards and Technology Authorization Act of 2010, the Secretary shall submit to Congress a report on the cost share requirements under the program. The report shall—

''(A) discuss various cost share structures, including the cost share structure in place prior to such date of enactment and the cost share structure in place under paragraph (7), and the effect of such cost share structures on individual Centers and the overall program; and

''(B) include a recommendation for how best to structure the cost share requirement after fiscal year 2015 to provide for the long-term sustainability of the program.''.

(e) ADVISORY BOARD.—Section 25(e)(4) of such Act (15 U.S.C. 278k(e)(4)) is amended to read as follows:

''(4) FEDERAL ADVISORY COMMITTEE ACT APPLICABILITY.—

''(A) IN GENERAL.—In discharging its duties under this subsection, the MEP Advisory Board shall function solely in an advisory capacity, in accordance with the Federal Advisory Committee Act.

''(B) EXCEPTION.—Section 14 of the Federal Advisory Committee Act shall not apply to the MEP Advisory Board.''.

(f) DEFINITIONS.—Section 25 of such Act (15 U.S.C. 278k) is further amended by adding after subsection (h), as added by subsection (c), the following:

''(i) DEFINITION.—In this section, the term 'community college' means an institution of higher education (as defined under section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a))) at which the highest degree that is predominately awarded to students is an associate's degree.''.

SEC. 408. EMERGENCY COMMUNICATION AND TRACKING TECHNOLOGIES RESEARCH INITIATIVE.

(a) ESTABLISHMENT.—The Director shall establish a research initiative to support the development of emergency communication and tracking technologies for use in locating trapped individuals in confined spaces, such as underground mines, and other shielded environments, such as high-rise buildings or collapsed structures, where conventional radio communication is limited.

(b) ACTIVITIES.—In order to carry out this section, the Director shall work with the private sector and appropriate Federal agencies to—

(1) perform a needs assessment to identify and evaluate the measurement, technical standards, and conformity assessment needs required to improve the operation and reliability of such emergency communication and tracking technologies; and

(2) support the development of technical standards and conformance architecture to improve the operation and reliability of such emergency communication and tracking technologies.

(c) REPORT.—Not later than 18 months after the date of enactment of this Act, the Director shall submit to Congress and make publicly available a report describing the assessment performed under subsection (b)(1) and making recommendations about research priorities to address gaps in the measurement, technical standards, and conformity assessment needs identified by such assessment.

SEC. 409. TIP ADVISORY BOARD.

Section 28(k)(4) of the National Institute of Standards and Technology Act (15 U.S.C. 278n(k)(4)) is amended to read as follows:

''(4) FEDERAL ADVISORY COMMITTEE ACT APPLICABILITY.—

''(A) IN GENERAL.—In discharging its duties under this subsection, the TIP Advisory Board shall function solely in an advisory capacity, in accordance with the Federal Advisory Committee Act.

''(B) EXCEPTION.—Section 14 of the Federal Advisory Committee Act shall not apply to the TIP Advisory Board.''.

SEC. 410. UNDERREPRESENTED MINORITIES.

(a) RESEARCH FELLOWSHIPS.—Section 18 of the National Institute of Standards and Technology Act (15 U.S.C. 278g-1) is amended by adding at the end the following:

''(c) UNDERREPRESENTED MINORITIES.—In evaluating applications for fellowships under this section, the Director shall give consideration to the goal of promoting the participation of underrepresented minorities in research areas supported by the Institute.''.

(b) POSTDOCTORAL FELLOWSHIP PROGRAM.—Section 19 of such Act (15 U.S.C. 278g-2) is amended by adding at the end the following: ''In evaluating applications for fellowships under this section, the Director shall give consideration to the goal of promoting the participation of underrepresented minorities in research areas supported by the Institute.''.

(c) TEACHER DEVELOPMENT.—Section 19A(c) of such Act (15 U.S.C. 278g-2a(c)) is amended by adding at the end the following: ''The Director shall give special consideration to an application from a teacher from a high-need school, as defined in section 200 of the Higher Education Act of 1965 (20 U.S.C. 1021).''.

SEC. 411. CYBER SECURITY STANDARDS AND GUIDELINES.

Cyber security standards and guidelines developed by the National Institute of Standards and Technology for use by United States industry and the public shall be voluntary.

SEC. 412. DEFINITIONS.

In this title:

(1) DIRECTOR.—The term ''Director'' means the Director of the National Institute of Standards and Technology.

(2) FEDERAL AGENCY.—The term ''Federal agency'' has the meaning given such term in section 4 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3703).

TITLE V—INNOVATION

SEC. 501. OFFICE OF INNOVATION AND ENTREPRENEURSHIP.

The Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3701 et seq.) is amended by adding at the end the following new section:

''SEC. 24. OFFICE OF INNOVATION AND ENTREPRENEURSHIP.

''(a) IN GENERAL.—The Secretary shall establish an Office of Innovation and Entrepreneurship to foster innovation and the commercialization of new technologies, products, processes, and services with the goal of promoting productivity and economic growth in the United States.

''(b) DUTIES.—The Office of Innovation and Entrepreneurship shall be responsible for—

''(1) developing and advocating policies to accelerate innovation and advance the commercialization of research and development, including federally funded research and development;

''(2) identifying existing barriers to innovation and commercialization, including access to capital and other resources, and ways to overcome those barriers;

''(3) providing access to relevant data, research, and technical assistance on innovation and commercialization;

''(4) strengthening collaboration on and coordination of policies relating to innovation and commercialization within the Department of Commerce and between the Department of Commerce and other Federal agencies, as appropriate; and

''(5) any other duties as determined by the Secretary.

''(c) ADVISORY COMMITTEE.—The Secretary shall establish an Advisory Council on Innovation and Entrepreneurship to provide advice to the Secretary on carrying out subsection (b).''.

SEC. 502. FEDERAL LOAN GUARANTEES FOR INNOVATIVE TECHNOLOGIES IN MANUFACTURING.

The Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3701 et seq.) is further amended by adding after section 24, as added by section 501 of this title, the following new section:

''SEC. 25. FEDERAL LOAN GUARANTEES FOR INNOVATIVE TECHNOLOGIES IN MANUFACTURING.

''(a) ESTABLISHMENT.—The Secretary shall establish a program to provide loan guarantees for obligations to small- or medium-sized manufacturers for the use or production of innovative technologies.

''(b) ELIGIBLE PROJECTS.—A loan guarantee may be made under such program only for a project that reequips, expands, or establishes a manufacturing facility in the United States to—

''(1) use an innovative technology or an innovative process in manufacturing; or

''(2) manufacture an innovative technology product or an integral component of such product.

''(c) ELIGIBLE BORROWER.—A loan guarantee may be made under such program only for a borrower who is a small- or medium-sized manufacturer, as determined by the Secretary under the criteria established pursuant to subsection (m).

''(d) LIMITATION ON AMOUNT.—A loan guarantee shall not exceed an amount equal to 80 percent of the obligation, as estimated at the time at which the loan guarantee is issued.

''(e) LIMITATIONS ON LOAN GUARANTEE.—No loan guarantee shall be made unless the Secretary determines that—

''(1) there is a reasonable prospect of repayment of the principal and interest on the obligation by the borrower;

''(2) the amount of the obligation (when combined with amounts available to the borrower from other sources) is sufficient to carry out the project;

''(3) the obligation is not subordinate to other financing;

''(4) the obligation bears interest at a rate that does not exceed a level that the Secretary determines appropriate, taking into account the prevailing rate of interest in the private sector for similar loans and risks; and

''(5) the term of an obligation requires full repayment over a period not to exceed the lesser of—

''(A) 30 years; or

''(B) 90 percent of the projected useful life, as determined by the Secretary, of the physical asset to be financed by the obligation.

''(f) DEFAULTS.—

''(1) PAYMENT BY SECRETARY.—

''(A) IN GENERAL.—If a borrower defaults (as defined in regulations promulgated by the Secretary and specified in the loan guarantee) on the obligation, the holder of the loan guarantee shall have the right to demand payment of the unpaid amount from the Secretary.

''(B) PAYMENT REQUIRED.—Within such period as may be specified in the loan guarantee or related agreements, the Secretary shall pay to the holder of the loan guarantee the unpaid interest on and unpaid principal of the obligation as to which the borrower has defaulted, unless the Secretary finds that there was no default by the borrower in the payment of interest or principal or that the default has been remedied.

''(C) FORBEARANCE.—Nothing in this subsection precludes any forbearance by the holder of the obligation for the benefit of the borrower which may be agreed upon by the parties to the obligation and approved by the Secretary.

''(2) SUBROGATION.—

''(A) IN GENERAL.—If the Secretary makes a payment under paragraph (1), the Secretary shall be subrogated to the rights, as specified in the loan guarantee, of the recipient of the payment or related agreements including, if appropriate, the authority (notwithstanding any other provision of law) to—

''(i) complete, maintain, operate, lease, or otherwise dispose of any property acquired pursuant to such loan guarantee or related agreement; or

''(ii) permit the borrower, pursuant to an agreement with the Secretary, to continue to pursue the purposes of the project if the Secretary determines that such an agreement is in the public interest.

''(B) SUPERIORITY OF RIGHTS.—The rights of the Secretary, with respect to any property acquired pursuant to a loan guarantee or related agreements, shall be superior to the rights of any other person with respect to the property.

''(3) ACTION BY ATTORNEY GENERAL.—

''(A) NOTIFICATION.—If the borrower defaults on an obligation, the Secretary shall notify the Attorney General of the default.

''(B) RECOVERY.—On notification, the Attorney General shall take such action as is appropriate to recover the unpaid principal and interest.

''(g) PAYMENT OF PRINCIPAL AND INTEREST BY SECRETARY.—With respect to any obligation guaranteed under this section, the Secretary may enter into a contract to pay, and pay, holders of the obligation for and on behalf of the borrower from funds appropriated for that purpose the principal and interest payments that become due and payable on the unpaid balance of the obligation if the Secretary finds that—

''(1)(A) the borrower is unable to make the payments and is not in default;

''(B) it is in the public interest to permit the borrower to continue to pursue the project; and

''(C) the probable net benefit to the Federal Government in paying the principal and interest will be greater than that which would result in the event of a default;

''(2) the amount of the payment that the Secretary is authorized to pay shall be no greater than the amount of principal and interest that the borrower is obligated to pay under the obligation being guaranteed; and

''(3) the borrower agrees to reimburse the Secretary for the payment (including interest) on terms and conditions that are satisfactory to the Secretary.

''(h) TERMS AND CONDITIONS.—A loan guarantee under this section shall include such detailed terms and conditions as the Secretary determines appropriate to—

''(1) protect the interests of the United States in the case of default; and

''(2) have available all the patents and technology necessary for any person selected, including the Secretary, to complete and operate the project.

''(i) CONSULTATION.—In establishing the terms and conditions of a loan guarantee under this section, the Secretary shall consult with the Secretary of the Treasury.

''(j) FEES.—

''(1) IN GENERAL.—The Secretary shall charge and collect fees for loan guarantees in amounts the Secretary determines are sufficient to cover applicable administrative expenses.

''(2) AVAILABILITY.—Fees collected under this subsection shall—

''(A) be deposited by the Secretary into the Treasury of the United States; and

''(B) remain available until expended, subject to such other conditions as are contained in annual appropriations Acts.

''(k) RECORDS.—

''(1) IN GENERAL.—With respect to a loan guarantee under this section, the borrower, the lender, and any other appropriate party shall keep such records and other pertinent documents as the Secretary shall prescribe by regulation, including such records as the Secretary may require to facilitate an effective audit.

''(2) ACCESS.—The Secretary and the Comptroller General of the United States, or their duly authorized representatives, shall have access to records and other pertinent documents for the purpose of conducting an audit.

''(l) FULL FAITH AND CREDIT.—The full faith and credit of the United States is pledged to the payment of all loan guarantees issued under this section with respect to principal and interest.

''(m) REGULATIONS.—The Secretary shall issue final regulations before making any loan guarantees under the program. Such regulations shall include—

''(1) criteria that the Secretary shall use to determine eligibility for loan guarantees under this section, including—

''(A) whether a borrower is a small- or medium-sized manufacturer; and

''(B) whether a borrower demonstrates that a market exists for the innovative technology product, or the integral component of such product, to be manufactured, as evidenced by written statements of interest from potential purchasers;

''(2) policies and procedures for selecting and monitoring lenders and loan performance; and

''(3) any other policies, procedures, or information necessary to implement this section.

''(n) AUDIT.—

''(1) ANNUAL INDEPENDENT AUDITS.—The Secretary shall enter into an arrangement with an independent auditor for annual evaluations of the program under this section.

''(2) ANNUAL REVIEW.—The Comptroller General shall conduct an annual review of the Secretary's execution of the program under this section.

''(3) REPORT.—The results of the independent audit under paragraph (1) and the Comptroller General's review under paragraph (2) shall be provided directly to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

''(o) REPORT TO CONGRESS.—Concurrent with the submission to Congress of the President's annual budget request in each year after the date of enactment of this section, the Secretary shall transmit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report containing a summary of all activities carried out under this section.

''(p) COORDINATION AND NONDUPLICATION.—To the maximum extent practicable, the Secretary shall ensure that the activities carried out under this section are coordinated with, and do not duplicate the efforts of, other loan guarantee programs within the Federal Government.

''(q) MEP CENTERS.—The Secretary may use centers established under section 25 of the National Institute of Standards and Technology Act (15 U.S.C. 278k) to provide information about the program established under this section and to conduct outreach to potential borrowers, as appropriate.

''(r) MINIMIZING RISK.—The Secretary shall promulgate regulations and policies to carry out this section in accordance with Office of Management and Budget Circular No. A-129, entitled 'Policies for Federal Credit Programs and Non-Tax Receivables', as in effect on the date of enactment of this section.

''(s) SENSE OF CONGRESS.—It is the sense of Congress that no loan guarantee shall be made under this section unless the borrower agrees to use a federally-approved electronic employment eligibility verification system to verify the employment eligibility of—

''(1) all persons hired during the contract term by the borrower to perform employment duties within the United States; and

''(2) all persons assigned by the borrower to perform work within the United States on the project.

''(t) DEFINITIONS.—In this section:

''(1) COST.—The term 'cost' has the meaning given such term under section 502 of the Federal Credit Reform Act of 1990 (2 U.S.C. 661a).

''(2) INNOVATIVE PROCESS.—The term 'innovative process' means a process that is significantly improved as compared to the process in general use in the commercial marketplace in the United States at the time the loan guarantee is issued.

''(3) INNOVATIVE TECHNOLOGY.—The term 'innovative technology' means a technology that is significantly improved as compared to the technology in general use in the commercial marketplace in the United States at the time the loan guarantee is issued.

''(4) LOAN GUARANTEE.—The term 'loan guarantee' has the meaning given such term in section 502 of the Federal Credit Reform Act of 1990 (2 U.S.C. 661a). The term includes a loan guarantee commitment (as defined in section 502 of such Act (2 U.S.C. 661a)).

''(5) OBLIGATION.—The term 'obligation' means the loan or other debt obligation that is guaranteed under this section.

''(6) PROGRAM.—The term 'program' means the loan guarantee program established in subsection (a).

''(u) AUTHORIZATION OF APPROPRIATIONS.—

''(1) COST OF LOAN GUARANTEES.—There are authorized to be appropriated $50,000,000 for each of fiscal years 2011 through 2015 to provide the cost of loan guarantees under this section.

''(2) PRINCIPAL AND INTEREST.—There are authorized to be appropriated such sums as are necessary to carry out subsection (g).''.

SEC. 503. REGIONAL INNOVATION PROGRAM.

The Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3701 et seq.) is further amended by adding after section 25, as added by section 502 of this title, the following new section:

''SEC. 26. REGIONAL INNOVATION PROGRAM.

''(a) ESTABLISHMENT.—The Secretary shall establish a regional innovation program to encourage and support the development of regional innovation strategies, including regional innovation clusters.

''(b) REGIONAL INNOVATION CLUSTER GRANTS.—

''(1) IN GENERAL.—As part of the program established under subsection (a), the Secretary may award grants on a competitive basis to eligible recipients for activities relating to the formation and development of regional innovation clusters.

''(2) PERMISSIBLE ACTIVITIES.—Grants awarded under this subsection may be used for activities determined appropriate by the Secretary, including the following:

''(A) Feasibility studies.

''(B) Planning activities.

''(C) Technical assistance.

''(D) Developing or strengthening communication and collaboration between and among participants of a regional innovation cluster.

''(E) Attracting additional participants to a regional innovation cluster.

''(F) Facilitating market development of products and services developed by a regional innovation cluster, including through demonstration, deployment, technology transfer, and commercialization activities.

''(G) Developing relationships between a regional innovation cluster and entities or clusters in other regions.

''(3) ELIGIBLE RECIPIENT.—For purposes of this subsection, the term 'eligible recipient' means any of the following:

''(A) A State.

''(B) An Indian tribe.

''(C) A city or other political subdivision of a State.

''(D) An entity that—

''(i) is a nonprofit organization, an institution of higher education, a public-private partnership, or an economic development organization or similar entity; and

''(ii) has an application that is supported by a State or a political subdivision of a State.

''(E) A consortium of any of the entities listed in subparagraphs (A) through (D).

''(4) APPLICATION.—

''(A) IN GENERAL.—An eligible recipient shall submit an application to the Secretary at such time, in such manner, and containing such information and assurances as the Secretary may require.

''(B) COMPONENTS.—The application shall include, at a minimum, a description of the regional innovation cluster supported by the proposed activity, including a description of the following:

''(i) Whether the regional innovation cluster is supported by the private sector, State and local governments, and other relevant stakeholders.

''(ii) How the existing participants in the regional innovation cluster will encourage and solicit participation by all types of entities that might benefit from participation, including newly formed entities and those rival to existing participants.

''(iii) The extent to which the regional innovation cluster is likely to stimulate innovation and have a positive impact on regional economic growth and development.

''(iv) Whether the participants in the regional innovation cluster have access to, or contribute to, a well-trained workforce.

''(v) Whether the participants in the regional innovation cluster are capable of attracting additional funds from non-Federal sources.

''(vi) The likelihood that the participants in the regional innovation cluster will be able to sustain activities once grant funds under this subsection have been expended.

''(5) COST SHARE.—The Secretary may not provide more than 50 percent of the total cost of any activity funded under this subsection.

''(6) USE AND APPLICATION OF RESEARCH AND INFORMATION PROGRAM.—To the maximum extent practicable, the Secretary shall ensure that activities funded under this subsection use and apply any relevant research, best practices, and metrics developed under the program established in subsection (c).

''(c) REGIONAL INNOVATION RESEARCH AND INFORMATION PROGRAM.—

''(1) IN GENERAL.—As part of the program established under subsection (a), the Secretary shall establish a regional innovation research and information program to—

''(A) gather, analyze, and disseminate information on best practices for regional innovation strategies (including regional innovation clusters), including information relating to how innovation, productivity, and economic development can be maximized through such strategies;

''(B) provide technical assistance, including through the development of technical assistance guides, for the development and implementation of regional innovation strategies (including regional innovation clusters);

''(C) support the development of relevant metrics and measurement standards to evaluate regional innovation strategies (including regional innovation clusters), including the extent to which such strategies stimulate innovation, productivity, and economic development; and

''(D) collect and make available data on regional innovation cluster activity in the United States, including data on—

''(i) the size, specialization, and competitiveness of regional innovation clusters;

''(ii) the regional domestic product contribution, total jobs and earnings by key occupations, establishment size, nature of specialization, patents, Federal research and development spending, and other relevant information for regional innovation clusters; and

''(iii) supply chain product and service flows within and between regional innovation clusters.

''(2) RESEARCH GRANTS.—The Secretary may award research grants on a competitive basis to support and further the goals of the program established under this subsection.

''(3) DISSEMINATION OF INFORMATION.—Data and analysis compiled by the Secretary under the program established in this subsection shall be made available to other Federal agencies, State and local governments, and nonprofit and for-profit entities.

''(4) CLUSTER GRANT PROGRAM.—The Secretary shall incorporate data and analysis relating to any regional innovation cluster supported by a grant under subsection (b) into the program established under this subsection.

''(d) INTERAGENCY COORDINATION.—

''(1) IN GENERAL.—To the maximum extent practicable, the Secretary shall ensure that the activities carried out under this section are coordinated with, and do not duplicate the efforts of, other programs at the Department of Commerce or other Federal agencies.

''(2) COLLABORATION.—The Secretary shall explore and pursue collaboration with other Federal agencies, including through multiagency funding opportunities, on regional innovation strategies.

''(e) EVALUATION.—

''(1) IN GENERAL.—Not later than 4 years after the date of enactment of this section, the Secretary shall enter into a contract with an independent entity, such as the National Academy of Sciences, to conduct an evaluation of the program established under subsection (a).

''(2) REQUIREMENTS.—The evaluation shall include—

''(A) whether such program is achieving its goals;

''(B) any recommendations for how such program may be improved; and

''(C) a recommendation as to whether such program should be continued or terminated.

''(f) REGIONAL INNOVATION CLUSTER DEFINED.—The term 'regional innovation cluster' means a geographically bounded network of similar, synergistic, or complementary entities that—

''(1) are engaged in or with a particular industry sector;

''(2) have active channels for business transactions and communication;

''(3) share specialized infrastructure, labor markets, and services; and

''(4) leverage the region's unique competitive strengths to stimulate innovation and create jobs.

''(g) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated such sums as are necessary for each of fiscal years 2011 through 2015 to carry out this section, including such sums as are necessary to carry out the evaluation required under subsection (e).''.

TITLE VI—DEPARTMENT OF ENERGY

Subtitle A—Office of Science

SEC. 601. SHORT TITLE.

This subtitle may be cited as the ''Department of Energy Office of Science Authorization Act of 2010''.

SEC. 602. DEFINITIONS.

Except as otherwise provided, in this subtitle:

(1) DEPARTMENT.—The term ''Department'' means the Department of Energy.

(2) DIRECTOR.—The term ''Director'' means the Director of the Office of Science.

(3) OFFICE OF SCIENCE.—The term ''Office of Science'' means the Department of Energy Office of Science.

(4) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

SEC. 603. MISSION OF THE OFFICE OF SCIENCE.

(a) MISSION.—The mission of the Office of Science shall be the delivery of scientific discoveries, capabilities, and major scientific tools to transform the understanding of nature and to advance the energy, economic, and national security of the United States.

(b) DUTIES.—In support of this mission, the Secretary shall carry out, through the Office of Science, programs on basic energy sciences, biological and environmental research, advanced scientific computing research, fusion energy sciences, high energy physics, and nuclear physics through activities focused on—

(1) Science for Discovery to unravel nature's mysteries through the study of subatomic particles, atoms, and molecules that make up the materials of our everyday world to DNA, proteins, cells, and entire biological systems;

(2) Science for National Need by—

(A) advancing a clean energy agenda through research on energy production, storage, transmission, efficiency, and use; and

(B) advancing our understanding of the Earth's climate through research in atmospheric and environmental sciences and climate change; and

(3) National Scientific User Facilities to deliver the 21st century tools of science, engineering, and technology and provide the Nation's researchers with the most advanced tools of modern science including accelerators, colliders, supercomputers, light sources and neutron sources, and facilities for studying the nanoworld.

(c) SUPPORTING ACTIVITIES.—The activities described in subsection (b) shall include providing for relevant facilities and infrastructure, analysis, coordination, and education and outreach activities.

(d) USER FACILITIES.—The Director shall carry out the construction, operation, and maintenance of user facilities to support the activities described in subsection (b). As practicable, these facilities shall serve the needs of the Department, industry, the academic community, and other relevant entities for the purposes of advancing the missions of the Department.

(e) OTHER AUTHORIZED ACTIVITIES.—In addition to the activities authorized under this subtitle, the Office of Science shall carry out such other activities it is authorized or required to carry out by law.

(f) COORDINATION AND JOINT ACTIVITIES.—The Department's Under Secretary for Science shall ensure the coordination of activities under this subtitle with the other activities of the Department, and shall support joint activities among the programs of the Department.

(g) DOMESTICALLY SOURCED HARDWARE.—

(1) PLAN.—The Director shall develop a plan to increase the percentage of domestically sourced hardware for planned and ongoing projects of the Department of Energy. In developing this plan, the Director shall—

(A) give consideration to technologies that the United States does not currently have the capacity to manufacture and to procurement activities that can strengthen United States high-technology competitiveness broadly;

(B) seek opportunities to engage and partner with domestic manufacturers; and

(C) annually assess levels of domestically available goods relevant to planned and ongoing projects of the Office of Science.

(2) INTERNATIONAL AGREEMENTS.—This subsection shall be applied in a manner consistent with United States obligations under international agreements.

(3) REPORT TO CONGRESS.—Not later than 1 year after the date of enactment of this Act, the Director shall transmit the plan developed under this subsection to the Committee on Energy and Natural Resources of the Senate and the Committee on Science and Technology of the House of Representatives, and shall transmit any appropriate updates to those committees.

(h) MERIT-REVIEWED STUDY.—As part of the President's annual budget request, the Secretary shall include a detailed summary of the degree to which current research activities are competitive and merit-reviewed, including a list of activities that would have been undertaken in the absence of Congressionally-directed projects and an analysis of the effects of increasing the proportion of competitive, merit-reviewed activities on the strategic objectives of the Office of Science.

SEC. 604. BASIC ENERGY SCIENCES PROGRAM.

(a) PROGRAM.—As part of the activities authorized under section 603, the Director shall carry out a program in basic energy sciences, including materials sciences and engineering, chemical sciences, physical biosciences, and geosciences, for the purpose of providing the scientific foundations for new energy technologies.

(b) BASIC ENERGY SCIENCES USER FACILITIES.—

(1) IN GENERAL.—The Director shall carry out a program for the construction, operation, and maintenance of national user facilities to support the program under this section. As practicable, these facilities shall serve the needs of the Department, industry, the academic community, and other relevant entities to create and examine new materials and chemical processes for the purposes of advancing new energy technologies and improving the competitiveness of the United States. These facilities shall include—

(A) x-ray light sources;

(B) neutron sources;

(C) electron beam microcharacterization centers;

(D) nanoscale science research centers; and

(E) other facilities the Director considers appropriate, consistent with section 603(d).

(2) FACILITY CONSTRUCTION AND UPGRADES.—Consistent with the Office of Science's project management practices, the Director shall support construction of—

(A) the National Synchrotron Light Source II;

(B) a Second Target Station at the Spallation Neutron Source; and

(C) an upgrade of the Advanced Photon Source to improve brightness and performance.

(c) ENERGY FRONTIER RESEARCH CENTERS.—

(1) IN GENERAL.—The Director shall carry out a grant program to provide awards, on a competitive, merit-reviewed basis, to multi-institutional collaborations or other appropriate entities to conduct fundamental and use-inspired energy research to accelerate scientific breakthroughs related to needs identified in—

(A) the Grand Challenges report of the Department's Basic Energy Sciences Advisory Committee;

(B) the Basic Energy Sciences Basic Research Needs workshop reports;

(C) energy-related Grand Challenges for Engineering, as described by the National Academy of Engineering; or

(D) other relevant reports identified by the Director.

(2) COLLABORATIONS.—A collaboration receiving a grant under this subsection may include multiple types of institutions and private sector entities.

(3) SELECTION AND DURATION.—

(A) IN GENERAL.—A collaboration under this subsection shall be selected for a period of 5 years.

(B) REAPPLICATION.—After the end of the period described in subparagraph (A), a grantee may reapply for selection for a second period of 5 years on a competitive, merit-reviewed basis.

(4) NO FUNDING FOR CONSTRUCTION.—No funding provided pursuant to this subsection may be used for the construction of new buildings or facilities.

(d) ACCELERATOR RESEARCH AND DEVELOPMENT.—The Director shall carry out research and development on advanced accelerator technologies relevant to the development of Basic Energy Sciences user facilities, in consultation with the Office of Science's High Energy Physics and Nuclear Physics programs.

SEC. 605. BIOLOGICAL AND ENVIRONMENTAL RESEARCH PROGRAM.

(a) IN GENERAL.—As part of the activities authorized under section 603, and coordinated with the activities authorized in section 604, the Director shall carry out a program of research, development, and demonstration in the areas of biological systems science and climate and environmental science to support the energy and environmental missions of the Department.

(b) BIOLOGICAL SYSTEMS SCIENCE ACTIVITIES.—

(1) ACTIVITIES.—As part of the activities authorized under subsection (a), the Director shall carry out research, development, and demonstration activities in fundamental, structural, computational, and systems biology to increase systems-level understanding of complex biological systems, which shall include activities to—

(A) accelerate breakthroughs and new knowledge that will enable cost-effective sustainable production of—

(i) biomass-based liquid transportation fuels, including hydrogen;

(ii) bioenergy; and

(iii) biobased products,

that support the energy and environmental missions of the Department;

(B) improve understanding of the global carbon cycle, including processes for removing carbon dioxide from the atmosphere, through photosynthesis and other biological processes, for sequestration and storage; and

(C) understand the biological mechanisms used to destroy, immobilize, or remove contaminants from subsurface environments.

(2) RESEARCH PLAN.—

(A) REQUIREMENT.—Not later than 1 year after the date of enactment of this Act, the Director shall prepare and transmit to Congress a research plan describing how the activities authorized under this subsection will be undertaken.

(B) UTILIZATION OF EXISTING PLAN.—In developing the plan in subparagraph (A), the Director may utilize an existing research plan and update such plan to incorporate the activities identified in paragraph (1).

(C) UPDATES.—Not later than 3 years after the initial report under this paragraph, and at least once every 3 years thereafter, the Director shall update the research plan and transmit it to Congress.

(3) BIOENERGY RESEARCH CENTERS.—

(A) IN GENERAL.—In carrying out the activities under paragraph (1), the Director shall support at least 3 bioenergy research centers to accelerate basic biological research, development, demonstration, and commercial application of biomass-based liquid transportation fuels, bioenergy, and biobased products that support the energy and environmental missions of the Department and are produced from a variety of regionally diverse feedstocks.

(B) GEOGRAPHIC DISTRIBUTION.—The Director shall ensure that the bioenergy research centers under this paragraph are established in geographically diverse locations.

(C) SELECTION AND DURATION.—A center established under subparagraph (A) shall be selected on a competitive, merit-reviewed basis for a period of 5 years beginning on the date of establishment of that center. A center already in existence on the date of enactment of this Act may continue to receive support for a period of 5 years beginning on the date of establishment of that center.

(4) ENABLING SYNTHETIC BIOLOGY PLAN.—

(A) IN GENERAL.—The Secretary, in consultation with other relevant Federal agencies, the academic community, research-based nonprofit entities, and the private sector, shall develop a comprehensive plan for federally supported research and development activities that will support the energy and environmental missions of the Department and enable a competitive synthetic biology industry in the United States.

(B) PLAN.—The plan developed under subparagraph (A) shall assess the need to create a database for synthetic biology information, the need and process for developing standards for biological parts, components and systems, and the need for a federally funded facility that enables the discovery, design, development, production, and systematic use of parts, components, and systems created through synthetic biology. The plan shall describe the role of the Federal Government in meeting these needs.

(C) SUBMISSION TO CONGRESS.—The Secretary shall transmit the plan developed under subparagraph (A) to the Congress not later than 9 months after the date of enactment of this Act.

(5) COMPUTATIONAL BIOLOGY AND SYSTEMS BIOLOGY KNOWLEDGEBASE.—As part of the activities described in paragraph (1), the Director, in collaboration with the Advanced Scientific Computing Research program described in section 606, shall carry out research in computational biology, acquire or otherwise ensure the availability of hardware for biology-specific computation, and establish and maintain an open virtual database and information management system to centrally integrate systems biology data, analytical software, and computational modeling tools that will allow data sharing and free information exchange within the scientific community.

(6) PROHIBITION ON BIOMEDICAL AND HUMAN CELL AND HUMAN SUBJECT RESEARCH.—

(A) NO BIOMEDICAL RESEARCH.—In carrying out activities under subsection (b), the Secretary shall not conduct biomedical research.

(B) LIMITATIONS.—Nothing in subsection (b) shall authorize the Secretary to conduct any research or demonstrations—

(i) on human cells or human subjects; or

(ii) designed to have direct application with respect to human cells or human subjects.

(C) INFORMATION SHARING.—Nothing in this paragraph shall restrict the Department from sharing information, including research findings, research methodologies, models, or any other information, with any Federal agency.

(7) REPEAL.—Section 977 of the Energy Policy Act of 2005 (42 U.S.C. 16317) is repealed.

(c) CLIMATE AND ENVIRONMENTAL SCIENCES ACTIVITIES.—

(1) IN GENERAL.—As part of the activities authorized under subsection (a), the Director shall carry out climate and environmental science research, which shall include activities to—

(A) understand, observe, and model the response of the Earth's atmosphere and biosphere, including oceans, to increased concentrations of greenhouse gas emissions, and any associated changes in climate;

(B) understand the processes for sequestration, destruction, immobilization, or removal of, and understand the movement of, contaminants and carbon in subsurface environments, including at facilities of the Department; and

(C) inform potential mitigation and adaptation options for increased concentrations of greenhouse gas emissions and any associated changes in climate.

(2) SUBSURFACE BIOGEOCHEMISTRY RESEARCH.—

(A) IN GENERAL.—As part of the activities described in paragraph (1), the Director shall carry out research to advance a fundamental understanding of coupled physical, chemical, and biological processes for controlling the movement of sequestered carbon and subsurface environmental contaminants, including field observations of subsurface microorganisms and field-scale subsurface research.

(B) COORDINATION.—

(i) DIRECTOR.—The Director shall carry out activities under this paragraph in accordance with priorities established by the Department's Under Secretary for Science to support and accelerate the decontamination of relevant facilities managed by the Department.

(ii) UNDER SECRETARY FOR SCIENCE.—The Department's Under Secretary for Science shall ensure the coordination of the activities of the Department, including activities under this paragraph, to support and accelerate the decontamination of relevant facilities managed by the Department.

(3) NEXT-GENERATION ECOSYSTEM-CLIMATE EXPERIMENT.—

(A) IN GENERAL.—As part of the activities described in paragraph (1), the Director, in collaboration with other relevant agencies that are participants in the United States Global Change Research Program, shall carry out the selection and development of a next-generation ecosystem-climate change experiment to understand the impact and feedbacks of increased temperature and elevated carbon levels on ecosystems.

(B) REPORT.—Not later than 1 year after the date of enactment of this Act, the Director shall transmit to the Congress a report containing—

(i) an identification of the location or locations that have been selected for the experiment described in subparagraph (A);

(ii) a description of the need for additional experiments; and

(iii) an associated research plan.

(4) AMERIFLUX NETWORK COORDINATION AND RESEARCH.—As part of the activities described in paragraph (1), the Director shall carry out research and coordinate the AmeriFlux Network to directly observe and understand the exchange of greenhouse gases, water vapor, and heat energy within terrestrial ecosystems and the response of those systems to climate change and other dynamic terrestrial landscape changes. The Director, in collaboration with other relevant Federal agencies, shall—

(A) identify opportunities to incorporate innovative and emerging observation technologies and practices into the existing Network;

(B) conduct research to determine the need for increased greenhouse gas observation Network facilities across North America to meet future mitigation and adaptation needs of the United States; and

(C) examine how the technologies and practices described in subparagraph (A), and increased coordination among scientific communities through the Network, have the potential to help characterize terrestrial baseline greenhouse gas emission sources and sinks in the United States and internationally.

(5) CLIMATE AND EARTH MODELING.—As part of the activities described in paragraph (1), the Director, in collaboration with the Advanced Scientific Computing Research program described in section 606, shall carry out research to develop, evaluate, and use high-resolution regional climate, global climate, Earth, and predictive models to inform decisions on reducing the impacts of changing climate.

(6) INTEGRATED ASSESSMENT RESEARCH.—As part of the activities described in paragraph (1), the Director shall carry out research into options for mitigation of and adaptation to climate change through multiscale models of the entire climate system. Such modeling shall include human processes and greenhouse gas emissions, land use, and interaction among human and Earth systems.

(7) COORDINATION.—The Director shall coordinate activities under this subsection with other Office of Science activities and with the United States Global Change Research Program.

(d) USER FACILITIES AND ANCILLARY EQUIPMENT.—

(1) IN GENERAL.—The Director shall carry out a program for the construction, operation, and maintenance of user facilities to support the program under this section. As practicable, these facilities shall serve the needs of the Department, industry, the academic community, and other relevant entities.

(2) INCLUDED FUNCTIONS.—User facilities described in paragraph (1) shall include facilities which carry out—

(A) genome sequencing and analysis of plants, microbes, and microbial communities using high throughput tools, technologies, and comparative analysis;

(B) molecular level research in biological, chemical, environmental, and subsurface sciences, including synthesis, dynamic properties, and interactions among natural and engineered materials; and

(C) measurement of cloud and aerosol properties used for examining atmospheric processes and evaluating climate model performance, including ground stations at various locations, mobile resources, and aerial vehicles.

SEC. 606. ADVANCED SCIENTIFIC COMPUTING RESEARCH PROGRAM.

(a) IN GENERAL.—As part of the activities authorized under section 603, the Director shall carry out a research, development, demonstration, and commercial application program to advance computational and networking capabilities to analyze, model, simulate, and predict complex phenomena relevant to the development of new energy technologies and the competitiveness of the United States.

(b) COORDINATION.—

(1) DIRECTOR.—The Director shall carry out activities under this section in accordance with priorities established by the Department's Under Secretary for Science to determine and meet the computational and networking research and facility needs of the Office of Science and all other relevant energy technology and energy efficiency programs within the Department.

(2) UNDER SECRETARY FOR SCIENCE.—The Department's Under Secretary for Science shall ensure the coordination of the activities of the Department, including activities under this section, to determine and meet the computational and networking research and facility needs of the Office of Science and all other relevant energy technology and energy efficiency programs within the Department.

(c) RESEARCH TO SUPPORT ENERGY APPLICATIONS.—As part of the activities authorized under subsection (a), the program shall support research in high-performance computing and networking relevant to energy applications, including both basic and applied energy research programs carried out by the Secretary.

(d) REPORTS.—

(1) ADVANCED COMPUTING FOR ENERGY APPLICATIONS.—Not later than one year after the date of enactment of this Act, the Secretary shall transmit to the Congress a plan to integrate and leverage the expertise and capabilities of the program described in subsection (a), as well as other relevant computational and networking research programs and resources supported by the Federal Government, to advance the missions of the Department's applied energy and energy efficiency programs.

(2) EXASCALE COMPUTING.—At least 18 months prior to the initiation of construction or installation of any exascale-class computing facility, the Secretary shall transmit a plan to the Congress detailing—

(A) the proposed facility's cost projections and capabilities to significantly accelerate the development of new energy technologies;

(B) technical risks and challenges that must be overcome to achieve successful completion and operation of the facility; and

(C) an assessment of the scientific and technological advances expected from such a facility relative to those expected from a comparable investment in expanded research and applications at terascale-class and petascale-class computing facilities.

(e) APPLIED MATHEMATICS AND SOFTWARE DEVELOPMENT FOR HIGH-END COMPUTING SYSTEMS.—The Director shall carry out activities to develop, test, and support mathematics, models, and algorithms for complex systems, as well as programming environments, tools, languages, and operating systems for high-end computing systems (as defined in section 2 of the Department of Energy High-End Computing Revitalization Act of 2004 (15 U.S.C. 5541)).

(f) HIGH-END COMPUTING FACILITIES.—The Director shall—

(1) provide for sustained access by the public and private research community in the United States to high-end computing systems, including access to the National Energy Research Scientific Computing Center and to Leadership Systems (as defined in section 2 of the Department of Energy High-End Computing Revitalization Act of 2004 (15 U.S.C. 5541));

(2) provide technical support for users of such systems; and

(3) conduct research and development on next-generation computing architectures and platforms to support the missions of the Department.

(g) OUTREACH.—The Secretary shall conduct outreach programs and may form partnerships to increase the use of and access to high-performance computing modeling and simulation capabilities by industry, including manufacturers.

SEC. 607. FUSION ENERGY RESEARCH PROGRAM.

(a) PROGRAM.—As part of the activities authorized under section 603, the Director shall carry out a fusion energy sciences research and enabling technology development program to effectively address the scientific and engineering challenges to building a cost-competitive fusion power plant and a competitive fusion power industry in the United States. As part of this program, the Director shall carry out research activities to expand the fundamental understanding of plasmas and matter at very high temperatures and densities.

(b) ITER.—The Director shall coordinate and carry out the responsibilities of the United States with respect to the ITER international fusion project pursuant to the Agreement on the Establishment of the ITER International Fusion Energy Organization for the Joint Implementation of the ITER Project.

(c) IDENTIFICATION OF PRIORITIES.—Not later than 18 months after the date of enactment of this Act, the Secretary shall transmit to the Congress a report on the Department's proposed research and development activities in magnetic fusion over the 10 years following the date of enactment of this Act under four realistic budget scenarios. The report shall—

(1) identify specific areas of fusion energy research and enabling technology development in which the United States can and should establish or solidify a lead in the global fusion energy development effort; and

(2) identify priorities for initiation of facility construction and facility decommissioning under each of those scenarios.

(d) FUSION MATERIALS RESEARCH AND DEVELOPMENT.—The Director, in coordination with the Assistant Secretary for Nuclear Energy of the Department, shall carry out research and development activities to identify, characterize, and create materials that can endure the neutron, plasma, and heat fluxes expected in a commercial fusion power plant. As part of the activities authorized under subsection (c), the Secretary shall—

(1) provide an assessment of the need for a facility or facilities that can examine and test potential fusion and next generation fission materials and other enabling technologies relevant to the development of commercial fusion power plants; and

(2) provide an assessment of whether a single new facility that substantially addresses magnetic fusion, inertial fusion, and next generation fission materials research needs is feasible, in conjunction with the expected capabilities of facilities operational as of the date of enactment of this Act.

(e) ENABLING TECHNOLOGY DEVELOPMENT.—The Director shall carry out activities to develop technologies necessary to enable the reliable, sustainable, safe, and economically competitive operation of a commercial fusion power plant.

(f) FUSION SIMULATION PROJECT.—In collaboration with the Office of Science's Advanced Scientific Computing Research program described in section 606, the Director shall carry out a computational project to advance the capability of fusion researchers to accurately simulate an entire fusion energy system.

(g) INERTIAL FUSION ENERGY RESEARCH AND DEVELOPMENT PROGRAM.—The Secretary shall carry out a program of research and technology development in inertial fusion for energy applications, including ion beam and laser fusion. Not later than 180 days after the release of a report from the National Academies on inertial fusion energy research, the Secretary shall transmit to Congress a report describing the Department's plan to incorporate any relevant recommendations from the National Academies' report into this program.

SEC. 608. HIGH ENERGY PHYSICS PROGRAM.

(a) PROGRAM.—As part of the activities authorized under section 603, the Director shall carry out a research program on the elementary constituents of matter and energy and the nature of space and time.

(b) NEUTRINO RESEARCH.—As part of the program described in subsection (a), the Director shall carry out research activities on rare decay processes and the nature of the neutrino, which may—

(1) include collaborations with the National Science Foundation on relevant projects; and

(2) utilize components of existing accelerator facilities to produce neutrino beams of sufficient intensity to explore research priorities identified by the High Energy Physics Advisory Panel or the National Academy of Sciences.

(c) DARK ENERGY AND DARK MATTER RESEARCH.—As part of the program described in subsection (a), the Director shall carry out research activities on the nature of dark energy and dark matter. These activities shall be consistent with research priorities identified by the High Energy Physics Advisory Panel or the National Academy of Sciences, and may include—

(1) the development of space-based and land-based facilities and experiments; and

(2) collaborations with the National Aeronautics and Space Administration, the National Science Foundation, or international collaborations on relevant research projects.

(d) ACCELERATOR RESEARCH AND DEVELOPMENT.—The Director shall carry out research and development in advanced accelerator concepts and technologies to reduce the necessary scope and cost for the next generation of particle accelerators.

(e) INTERNATIONAL COLLABORATION.—The Director, as practicable and in coordination with other appropriate Federal agencies as necessary, shall ensure the access of United States researchers to the most advanced accelerator facilities and research capabilities in the world, including the Large Hadron Collider.

SEC. 609. NUCLEAR PHYSICS PROGRAM.

(a) PROGRAM.—As part of the activities authorized under section 603, the Director shall carry out a research program, and support relevant facilities, to discover and understand various forms of nuclear matter.

(b) FACILITY CONSTRUCTION AND UPGRADES.—Consistent with the Office of Science's project management practices, the Director shall carry out—

(1) an upgrade of the Continuous Electron Beam Accelerator Facility to a 12 gigaelectronvolt beam of electrons; and

(2) construction of the Facility for Rare Isotope Beams.

(c) ISOTOPE DEVELOPMENT AND PRODUCTION FOR RESEARCH APPLICATIONS.—The Director shall carry out a program for the production of isotopes, including the development of techniques to produce isotopes, that the Secretary determines are needed for research, exluding medical research. In making this determination, the Secretary shall consider any relevant recommendations made by Federal advisory committees, the National Academies, and interagency working groups in which the Department participates.

SEC. 610. SCIENCE LABORATORIES INFRASTRUCTURE PROGRAM.

(a) PROGRAM.—The Director shall carry out a program to improve the safety, efficiency, and mission readiness of infrastructure at Office of Science laboratories. The program shall include projects to—

(1) renovate or replace space that does not meet research needs;

(2) replace facilities that are no longer cost effective to renovate or operate;

(3) modernize utility systems to prevent failures and ensure efficiency;

(4) remove excess facilities to allow safe and efficient operations; and

(5) construct modern facilities to conduct advanced research in controlled environmental conditions.

(b) MINOR CONSTRUCTION PROJECTS.—

(1) AUTHORITY.—Using operation and maintenance funds or facilities and infrastructure funds authorized by law, the Secretary may carry out minor construction projects with respect to laboratories administered by the Office of Science.

(2) ANNUAL REPORT.—The Secretary shall submit to Congress, as part of the annual budget submission of the Department, a report on each exercise of the authority under subsection (a) during the preceding fiscal year. Each report shall include a summary of maintenance and infrastructure needs and associated funding requirements at each of the laboratories, including the amount of both planned and deferred infrastructure spending at each laboratory. Each report shall provide a brief description of each minor construction project covered by the report.

(3) COST VARIATION REPORTS.—If, at any time during the construction of any minor construction project, the estimated cost of the project is revised and the revised cost of the project exceeds the minor construction threshold, the Secretary shall immediately submit to Congress a report explaining the reasons for the cost variation.

(4) DEFINITIONS.—In this section—

(A) the term ''minor construction project'' means any plant project not specifically authorized by law for which the approved total estimated cost does not exceed the minor construction threshold; and

(B) the term ''minor construction threshold'' means $10,000,000, with such amount to be adjusted by the Secretary in accordance with the Engineering News-Record Construction Cost Index, or an appropriate alternative index as determined by the Secretary, once every five years after the date of enactment of this Act.

(5) NONAPPLICABILITY.—Sections 4703 and 4704 of the Atomic Energy Defense Act (50 U.S.C. 2743 and 2744) shall not apply to laboratories administered by the Office of Science.

SEC. 611. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated to the Secretary for the activities of the Office of Science—

(1) $5,247,000,000 for fiscal year 2011, of which—

(A) $1,875,000,000 shall be for Basic Energy Sciences activities under section 604;

(B) $667,000,000 shall be for Biological and Environmental Research activities under section 605; and

(C) $466,000,000 shall be for Advanced Scientific Computing Research activities under section 606;

(2) $5,614,000,000 for fiscal year 2012, of which—

(A) $2,025,000,000 shall be for Basic Energy Sciences activities under section 604;

(B) $720,000,000 shall be for Biological and Environmental Research activities under section 605; and

(C) $503,000,000 shall be for Advanced Scientific Computing Research activities under section 606;

(3) $6,007,000,000 for fiscal year 2013, of which—

(A) $2,187,000,000 shall be for Basic Energy Sciences activities under section 604;

(B) $778,000,000 shall be for Biological and Environmental Research activities under section 605; and

(C) $544,000,000 shall be for Advanced Scientific Computing Research activities under section 606;

(4) $6,428,000,000 for fiscal year 2014, of which—

(A) $2,362,000,000 shall be for Basic Energy Sciences activities under section 604;

(B) $840,000,000 shall be for Biological and Environmental Research activities under section 605; and

(C) $587,000,000 shall be for Advanced Scientific Computing Research activities under section 606; and

(5) $6,878,000,000 for fiscal year 2015, of which—

(A) $2,551,000,000 shall be for Basic Energy Sciences activities under section 604;

(B) $907,000,000 shall be for Biological and Environmental Research activities under section 605; and

(C) $634,000,000 shall be for Advanced Scientific Computing Research activities under section 606.

Subtitle B—Advanced Research Projects Agency-Energy

SEC. 621. SHORT TITLE.

This subtitle may be cited as the ''ARPA-E Reauthorization Act of 2010''.

SEC. 622. ARPA-E AMENDMENTS.

Section 5012 of the America COMPETES Act (42 U.S.C. 16538) is amended—

(1) in subsection (c)(2)—

(A) in subparagraph (A), by inserting ''and applied'' after ''advances in fundamental'';

(B) by striking ''and'' at the end of subparagraph (B);

(C) by striking the period at the end of subparagraph (C) and inserting ''; and''; and

(D) by adding at the end the following new subparagraph:

''(D) promoting the commercial application of advanced energy technologies.'';

(2) in subsection (e)(3), by amending subparagraph (C) to read as follows:

''(C) research and development of advanced manufacturing process and technologies for the domestic manufacturing of novel energy technologies; and'';

(3) in subsection (e)—

(A) by striking ''and'' at the end of paragraph (3)(D);

(B) by striking the period at the end of paragraph (4) and inserting ''; and''; and

(C) by adding at the end the following new paragraph:

''(5) pursuant to subsection (c)(2)(C)—

''(A) ensuring that applications for funding disclose the extent of current and prior efforts, including monetary investments as appropriate, in pursuit of the technology area for which funding is being requested;

''(B) adopting measures to ensure that, in making awards, program managers adhere to the objectives in subsection (c)(2)(C); and

''(C) providing as part of the annual report required by subsection (h)(1) a summary of the instances of and reasons for ARPA-E funding projects in technology areas already being undertaken by industry.'';

(4) by redesignating subsections (f) through (m) as subsections (g), (h), (i), (j), (l), (m), (n), and (o), respectively;

(5) by inserting after subsection (e) the following new subsection:

''(f) AWARDS.—In carrying out this section, the Director shall initiate and execute awards in the form of grants, contracts, cooperative agreements, cash prizes, and other transactions.'';

(6) in subsection (g), as so redesignated by paragraph (4) of this section—

(A) by redesignating paragraphs (1) and (2) as paragraphs (2) and (3), respectively;

(B) by inserting before paragraph (2), as so redesignated by subparagraph (A) of this paragraph, the following new paragraph:

''(1) IN GENERAL.—The Director shall establish and maintain within ARPA-E a staff with sufficient qualifications and expertise to enable ARPA-E to carry out its responsibilities under this section in conjunction with the operations of the rest of the Department.'';

(C) in paragraph (2)(A), as so redesignated by subparagraph (A) of this paragraph—

(i) in the paragraph heading, by striking ''PROGRAM MANAGERS'' and inserting ''PROGRAM DIRECTORS'';

(ii) by striking ''program managers'' and inserting ''program directors''; and

(iii) by striking ''each of''.

(D) in paragraph (2)(B), as so redesignated by subparagraph (A) of this paragraph—

(i) by striking ''program manager'' and inserting ''program director'';

(ii) in clause (iv), by striking '', with advice under subsection (j) as appropriate,'';

(iii) by redesignating clauses (v) and (vi) as clauses (vi) and (viii), respectively;

(iv) by inserting after clause (iv) the following new clause:

''(v) identifying innovative cost-sharing arrangements for ARPA-E projects, including through use of the authority under section 988(b)(3) of the Energy Policy Act of 2005 (42 U.S.C. 16352(b)(3));'';

(v) in clause (vi), as so redesignated by clause (iii) of this subparagraph, by striking ''; and'' and inserting a semicolon; and

(vi) by inserting after clause (vi), as so redesignated by clause (iii) of this subparagraph, the following new clause:

''(vii) identifying mechanisms for commercial application of successful energy technology development projects, including through establishment of partnerships between awardees and commercial entities; and'';

(E) in paragraph (2)(C), as so redesignated by subparagraph (A) of this paragraph, by inserting ''up to'' after ''shall be'';

(F) in paragraph (3), as so redesignated by subparagraph (A) of this paragraph, by striking subparagraph (B) and redesignating subparagraphs (C) and (D) as subparagraphs (B) and (C), respectively; and

(G) by adding at the end the following new paragraph:

''(4) FELLOWSHIPS.—The Director is authorized to select exceptional early-career and senior scientific, legal, business, and technical personnel to serve as fellows to work at ARPA-E for terms not to exceed two years. Responsibilities of fellows may include—

''(A) supporting program managers in program creation, design, implementation, and management;

''(B) exploring technical fields for future ARPA-E program areas;

''(C) assisting the Director in the creation of the strategic vision for ARPA-E referred to in subsection (h)(2);

''(D) preparing energy technology and economic analyses; and

''(E) any other appropriate responsibilities identified by the Director.'';

(7) in subsection (h)(2), as so redesignated by paragraph (4) of this section—

(A) by striking ''2008'' and inserting ''2010''; and

(B) by striking ''2011'' and inserting ''2013'';

(8) by amending subsection (j), as so redesignated by paragraph (4) of this section, to read as follows:

''(j) FEDERAL DEMONSTRATION OF TECHNOLOGIES.—The Director shall seek opportunities to partner with purchasing and procurement programs of Federal agencies to demonstrate energy technologies resulting from activities funded through ARPA-E.'';

(9) by inserting after such subsection (j) the following new subsection:

''(k) EVENTS.—

''(1) The Director is authorized to convene, organize, and sponsor events that further the objectives of ARPA-E, including events that assemble awardees, the most promising applicants for ARPA-E funding, and a broad range of ARPA-E stakeholders (which may include members of relevant scientific research and academic communities, government officials, financial institutions, private investors, entrepreneurs, and other private entities), for the purposes of—

''(A) demonstrating projects of ARPA-E awardees;

''(B) demonstrating projects of finalists for ARPA-E awards and other energy technology projects;

''(C) facilitating discussion of the commercial application of energy technologies developed under ARPA-E and other government-sponsored research and development programs; or

''(D) such other purposes as the Director considers appropriate.

''(2) Funding for activities described in paragraph (1) shall be provided as part of the technology transfer and outreach activities authorized under subsection (o)(4)(B).'''';

(10) in subsection (m)(1), as so redesignated by paragraph (4) of this section, by striking ''4 years'' and inserting ''6 years'';

(11) in subsection (m)(2)(B), as so redesignated by paragraph (4) of this section, by inserting '', and how those lessons may apply to the operation of other programs within the Department of Energy'' after ''ARPA-E'';

(12) by amending subsection (o)(2), as so redesignated by paragraph (4) of this section, to read as follows:

''(2) AUTHORIZATION OF APPROPRIATIONS.—Subject to paragraph (4), there are authorized to be appropriated to the Director for deposit in the Fund, without fiscal year limitation—

''(A) $300,000,000 for fiscal year 2011;

''(B) $450,000,000 for fiscal year 2012;

''(C) $600,000,000 for fiscal year 2013;

''(D) $800,000,000 for fiscal year 2014; and

''(E) $1,000,000,000 for fiscal year 2015.'';

(13) in subsection (o), as so redesignated by paragraph (4) of this section, by—

(A) striking paragraph (4); and

(B) redesignating paragraph (5) as paragraph (4); and

(14) in subsection (o)(4)(B), as so redesignated by paragraphs (4) and (13)(B) of this subsection—

(A) by striking ''2.5 percent'' and inserting ''5 percent''; and

(B) by inserting '', consistent with the goal described in subsection (c)(2)(D) and within the responsibilities of program directors as specified in subsection (g)(2)(B)(vii)'' after ''outreach activities''.

Subtitle C—Energy Innovation Hubs

SEC. 631. SHORT TITLE.

This subtitle may be cited as the ''Energy Innovation Hubs Authorization Act of 2010''.

SEC. 632. ENERGY INNOVATION HUBS.

(a) ESTABLISHMENT OF PROGRAM.—

(1) IN GENERAL.—The Secretary of Energy shall carry out a program to enhance the Nation's economic, environmental, and energy security by making grants to consortia for establishing and operating Energy Innovation Hubs to conduct and support, whenever practicable at one centralized location, multidisciplinary, collaborative research, development, demonstration, and commercial application of advanced energy technologies in areas not being served by the private sector.

(2) TECHNOLOGY DEVELOPMENT FOCUS.—The Secretary shall designate for each Hub a unique advanced energy technology development focus.

(3) COORDINATION.—The Secretary shall ensure the coordination of, and avoid unnecessary duplication of, the activities of Hubs with those of other Department of Energy research entities, including the National Laboratories, the Advanced Research Projects Agency—Energy, and Energy Frontier Research Centers, and within industry. Such coordination shall include convening and consulting with representatives of staff of the Department of Energy, representatives from Hubs and the qualifying entities that are members of the consortia operating the Hubs, and representatives of such other entities as the Secretary considers appropriate, to share research results, program plans, and opportunities for collaboration.

(4) ADMINISTRATION.—The Secretary shall administer this section with respect to each Hub through the Department program office appropriate to administer the subject matter of the technology development focus assigned under paragraph (2) for the Hub.

(b) CONSORTIA.—

(1) ELIGIBILITY.—To be eligible to receive a grant under this section for the establishment and operation of a Hub, a consortium shall—

(A) be composed of no fewer than 2 qualifying entities;

(B) operate subject to a binding agreement entered into by its members that documents—

(i) the proposed partnership agreement, including the governance and management structure of the Hub;

(ii) measures to enable cost-effective implementation of the program under this section;

(iii) a proposed budget, including financial contributions from non-Federal sources;

(iv) conflict of interest procedures consistent with subsection (d)(3), all known material conflicts of interest, and corresponding mitigation plans;

(v) an accounting structure that enables the Secretary to ensure that the consortium has complied with the requirements of this section; and

(vi) an external advisory committee consistent with subsection (d)(2); and

(C) operate as a nonprofit organization.

(2) APPLICATION.—A consortium seeking to establish and operate a Hub under this section, acting through a prime applicant, shall transmit to the Secretary an application at such time, in such form, and accompanied by such information as the Secretary shall require, including a detailed description of the elements of the consortium agreement required under paragraph (1)(B). If the consortium members will not be located at one centralized location, such application shall include a communications plan that ensures close coordination and integration of the Hub's activities.

(c) SELECTION AND SCHEDULE.—The Secretary shall select consortia for grants for the establishment and operation of Hubs through competitive selection processes. Grants made to a Hub shall be for a period not to exceed 5 years, after which the grant may be renewed, subject to a competitive selection process.

(d) HUB OPERATIONS.—

(1) IN GENERAL.—Hubs shall conduct or provide for multidisciplinary, collaborative research, development, demonstration, and commercial application of advanced energy technologies within the technology development focus designated for the Hub by the Secretary under subsection (a)(2). Each Hub shall—

(A) encourage collaboration and communication among the member qualifying entities of the consortium and awardees by conducting activities whenever practicable at one centralized location;

(B) develop and publish on the Department of Energy's website proposed plans and programs;

(C) submit an annual report to the Secretary summarizing the Hub's activities, including detailing organizational expenditures, listing external advisory committee members, and describing each project undertaken by the Hub; and

(D) monitor project implementation and coordination.

(2) EXTERNAL ADVISORY COMMITTEE.—Each Hub shall establish an external advisory committee, the membership of which shall have sufficient expertise to advise and provide guidance on scientific, technical, industry, financial, and research management matters.

(3) CONFLICTS OF INTEREST.—

(A) PROCEDURES.—Hubs shall establish conflict of interest procedures, consistent with those of the Department of Energy, to ensure that employees and consortia designees for Hub activities who are in decisionmaking capacities disclose all material conflicts of interest, including financial, organizational, and personal conflicts of interest.

(B) DISQUALIFICATION AND REVOCATION.—The Secretary may disqualify an application or revoke funds distributed to a Hub if the Secretary discovers a failure to comply with conflict of interest procedures established under subparagraph (A).

(e) PROHIBITION ON CONSTRUCTION.—

(1) IN GENERAL.—No funds provided pursuant to this section may be used for construction of new buildings or facilities for Hubs. Construction of new buildings or facilities shall not be considered as part of the non-Federal share of a Hub cost-sharing agreement.

(2) TEST BED AND RENOVATION EXCEPTION.—Nothing in this subsection shall prohibit the use of funds provided pursuant to this section, or non-Federal cost share funds, for the construction of a test bed or renovations to existing buildings or facilities for the purposes of research if the Oversight Board determines that the test bed or renovations are limited to a scope and scale necessary for the research to be conducted.

(f) OVERSIGHT BOARD.—The Secretary shall establish and maintain within the Department an Oversight Board to oversee the progress of Hubs.

(g) PRIORITY CONSIDERATION.—The Secretary shall give priority consideration to applications in which 1 or more of the institutions under subsection (b)(1)(A) are 1890 Land Grant Institutions (as defined in section 2 of the Agricultural Research, Extension, and Education Reform Act of 1998 (7 U.S.C. 7061)), Predominantly Black Institutions (as defined in section 318 of the Higher Education Act of 1965 (20 U.S.C. 1059e)), Tribal Colleges or Universities (as defined in section 316(b) of the Higher Education Act of 1965 (20 U.S.C. 1059c(b)), or Hispanic Serving Institutions (as defined in section 318 of the Higher Education Act of 1965 (20 U.S.C. 1059e)).

(h) DEFINITIONS.—For purposes of this section:

(1) ADVANCED ENERGY TECHNOLOGY.—The term ''advanced energy technology'' means an innovative technology—

(A) that produces energy from solar, wind, geothermal, biomass, tidal, wave, ocean, or other renewable energy resources;

(B) that produces nuclear energy;

(C) for carbon capture and sequestration;

(D) that enables advanced vehicles, vehicle components, and related technologies that result in significant energy savings;

(E) that generates, transmits, distributes, utilizes, or stores energy more efficiently than conventional technologies; or

(F) that enhances the energy independence and security of the United States by enabling improved or expanded supply and production of domestic energy resources, including coal, oil, and natural gas.

(2) HUB.—The term ''Hub'' means an Energy Innovation Hub established in accordance with this section.

(3) INSTITUTION OF HIGHER EDUCATION.—The term ''institution of higher education'' has the meaning given that term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

(4) QUALIFYING ENTITY.—The term ''qualifying entity'' means—

(A) an institution of higher education;

(B) an appropriate State or Federal entity, including the Department of Energy Federally Funded Research and Development Centers;

(C) a nongovernmental organization with expertise in advanced energy technology research, development, demonstration, or commercial application; or

(D) any other relevant entity the Secretary considers appropriate.

(5) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

(i) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out this section—

(1) $110,000,000 for fiscal year 2011;

(2) $135,000,000 for fiscal year 2012;

(3) $195,000,000 for fiscal year 2013;

(4) $210,000,000 for fiscal year 2014; and

(5) $210,000,000 for fiscal year 2015.

Subtitle D—Cooperative Research and Development Fund

SEC. 641. SHORT TITLE.

This subtitle may be cited as the ''Cooperative Research and Development Fund Authorization Act of 2010''.

SEC. 642. COOPERATIVE RESEARCH AND DEVELOPMENT FUND.

(a) IN GENERAL.—The Secretary of Energy shall make funds available to Department of Energy National Laboratories for the Federal share of cooperative research and development agreements. The Secretary of Energy shall determine the apportionment of such funds to each Department of Energy National Laboratory and shall ensure that special consideration is given to small business firms and consortia involving small business firms in the selection process for which cooperative research and development agreements will receive such funds.

(b) REPORTING.—Each year the Secretary shall submit to Congress a report that describes how funds were expended under this subtitle.

(c) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary such sums as are necessary to carry out this section each fiscal year. No funds allocated for this section shall come from funds allocated for the Office of Science.

TITLE VII—MISCELLANEOUS

SEC. 701. SENSE OF CONGRESS.

It is the sense of Congress that, among the programs and activities authorized in this Act, those that correspond to the recommendations of the National Academy of Sciences' 2005 report entitled ''Rising Above the Gathering Storm'' remain critical to maintaining long-term United States economic competitiveness, and accordingly shall receive funding priority.

SEC. 702. PERSONS WITH DISABILITIES.

For the purposes of the activities and programs supported by this Act and the amendments made by this Act, institutions of higher education chartered to serve large numbers of students with disabilities, including Gallaudet University, Landmark College, and the National Technical Institute for the Deaf and those with programs serving or those serving disabled veterans, shall receive special consideration and have a designation consistent with the designation for other institutions that serve populations underrepresented in STEM to ensure that institutions of higher education chartered to or serving persons with disabilities benefit from such activities and programs.

SEC. 703. VETERANS AND SERVICE MEMBERS.

In awarding scholarships and fellowships under this Act, an institution of higher education shall give preference to applications from veterans and service members, including those who have received or will receive the Afghanistan Campaign Medal or the Iraq Campaign Medal as authorized by Public Law 108–234 (10 U.S.C. 1121 note; 118 Stat. 655) and Executive Order No. 13363.

The CHAIR. No amendment to the committee amendment in the nature of a substitute is in order except those printed in part B of the report and amendments en bloc described in section 3 of House Resolution 1344. Each amendment may be offered only in the order printed in the report, by a Member designated in the report, shall be considered read, shall be debatable for the time specified in the report, equally divided and controlled by the proponent and an opponent, shall not be subject to amendment, and shall not be subject to a demand for division of the question.

It shall be in order at any time for the chair of the Committee on Science and Technology or his designee to offer amendments en bloc consisting of amendments printed in part B of the report not earlier disposed of. Amendments en bloc shall be considered as read, shall be debatable for 40 minutes equally divided and controlled by the chair and ranking minority member of the committee or their designees, shall not be subject to amendment, and shall not be subject to a demand for division of the question. The original proponent of an amendment included in such amendments en bloc may insert a statement in the CONGRESSIONAL RECORD immediately before the disposition of the amendments en bloc.

AMENDMENT NO. 1 OFFERED BY MR. GORDON OF TENNESSEE

The CHAIR. It is now in order to consider amendment No. 1 printed in part B of House Report 111–479.

Mr. GORDON of Tennessee. Madam Chair, I have an amendment at the desk.

The CHAIR. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 1 offered by Mr. GORDON of Tennessee:

Page 94, line 10, strike ''in the research'' and insert ''in research on the topic''.

Page 102, lines 1 through 9, section 243 is amended to read as follows:

SEC. 243. ROBERT NOYCE TEACHER SCHOLARSHIP PROGRAM.

Section 10A(h)(1) of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n–1a(h)(1)) is amended to read as follows:

''(1) IN GENERAL.—An eligible entity receiving a grant under this section shall provide, from non-Federal sources, to carry out the activities supported by the grant—

''(A) in the case of grants in an amount of less than $1,500,000, an amount equal to at least 30 percent of the amount of the grant, at least one half of which shall be in cash; and

''(B) in the case of grants in an amount of $1,500,000 or more, an amount equal to at least 50 percent of the amount of the grant, at least one half of which shall be in cash.''.

Page 123, line 13, strike ''10 or more undergraduate STEM students'' and insert ''6 or more undergraduate STEM students for sites designated at primarily undergraduate institutions of higher education and 10 or more undergraduate STEM students for all other sites''.

Page 126, line 9, insert '', except for institutions of higher education'' after ''private sector entities''.

Page 131, lines 17 and 18, strike ''teachers, administrators, local education agencies''

and insert ''teachers and administrators in both public and private schools, local educational agencies''.

Page 135, line 13, strike ''and''.

Page 135, line 14, insert ''and'' after the semicolon.

Page 135, after line 14, insert the following new clause:

''(ix) carbon capture and sequestration science and engineering;''.

Page 174, after line 13, insert the following:

SEC. 412. REPORT ON THE USE OF MODELING AND SIMULATION.

(a) IN GENERAL.—Within 1 year after the date of enactment of this Act, the Director shall submit a report to Congress examining the use of high-performance computational modeling and simulation by small- and medium-sized manufacturers.

(b) SPECIFIC REQUIREMENTS.—Such report shall include the following:

(1) An assessment of the current utilization of high-performance computational modeling and simulation by small- and medium-sized manufacturers.

(2) An examination of any barriers or challenges to the use of high-performance computational modeling and simulation by small- and medium-sized manufacturers, including—

(A) access to high-performance computing facilities and resources;

(B) the availability of software and other applications tailored to meet the needs of such manufacturers;

(C) appropriate expertise and training; and

(D) the availability of tools and other methods to understand and manage the costs and risks associated with transitioning to the use of computational modeling and simulation.

(3) Recommendations for addressing any barriers or challenges identified in paragraph (2) and, if appropriate, suggestions for action that the Federal Government may take to foster the development and utilization of high-performance computing resources by small- and medium-sized manufacturers.

(c) CONSULTATION.—In carrying out this section, the Director shall consult with the Office of Science and Technology Policy and with other relevant Federal agencies.

Page 175, line 16, strike ''and advocating''.

Page 180, strike line 13 and all that follows through line 20 and insert the following:

''(3) NOTIFICATION.—If the borrower defaults on an obligation, the Secretary shall notify the Attorney General of the default.''.

Page 184, line 8, strike ''ANNUAL'' and insert ''COMPTROLLER GENERAL''.

Page 184, line 8, strike ''The Comptroller General'' and insert ''The Comptroller General of the United States''.

Page 184, line 9, strike ''an annual'' and insert ''a biennial''.

Page 194, strike line 20 and all that follows through page 195, line 6, and insert the following:

''(f) DEFINITIONS.—In this section:

''(1) REGIONAL INNOVATION CLUSTER.—The term 'regional innovation cluster' means a geographically bounded network of similar, synergistic, or complementary entities that—

''(A) are engaged in or with a particular industry sector;

''(B) have active channels for business transactions and communication;

''(C) share specialized infrastructure, labor markets, and services; and

''(D) leverage the region's unique competitive strengths to stimulate innovation and create jobs.

''(2) STATE.—The term 'State' means one of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or any other territory or possession of the United States.

Page 198, lines 13 and 14, strike ''Department of Energy'' and insert ''Office of Science''.

Page 219, lines 7 and 8, strike ''Director'' and insert ''Secretary''.

Page 229, line 7, strike ''shall'' and insert ''may''.

Page 231, lines 13 through 17, amend subparagraph (F) to read as follows:

(F) in paragraph (3)(B), as so redesignated by subparagraph (A) of this paragraph, by striking ''not less than 70, and not more than 120,'' and inserting ''not more than 120''; and

Page 232, line 1, strike ''managers'' and insert ''directors''.

Page 238, line 24, insert ''In selecting consortia, the Secretary shall consider the information a consortium must disclose according to subsection (b), as well as any existing facilities a consortium will provide for Hub activities.'' after ''selection processes.''.

Page 245, lines 12 through 24, amend section 702 to read as follows:

SEC. 702. PERSONS WITH DISABILITIES.

For the purposes of the activities and programs supported by this Act and the amendments made by this Act—

(1) institutions of higher education chartered to serve large numbers of students with disabilities, including Gallaudet University, Landmark College, and the National Technical Institute for the Deaf, and institutions of higher education offering science, technology, engineering, and mathematics research and education activities and programs that serve veterans with disabilities, shall receive special consideration in the review of any proposals by these institutions for funding under the research and education programs authorized in this Act to ensure that institutions of higher education chartered to or serving persons with disabilities benefit from such research and education activities and programs; and

(2) agencies with respect to which appropriations are authorized under this Act shall also conduct outreach to veterans with disabilities pursuing studies in science, technology, engineering, and mathematics to ensure that such veterans are aware of and benefit from the research and education activities and programs authorized by this Act.

Page 246, after line 8, insert the following new sections:

SEC. 704. BUDGETARY EFFECTS.

The budgetary effects of this Act, for the purpose of complying with the Statutory Pay-As-You-Go-Act of 2010, shall be determined by reference to the latest statement titled ''Budgetary Effects of PAYGO Legislation'' for this Act, submitted for printing in the Congressional Record by the Chairman of the House Budget Committee, provided that such statement has been submitted prior to the vote on passage.

SEC. 705. LIMITATION.

No funds authorized under this Act shall be used for the employment of, or shall be received by, any individual who has been convicted of, or pleaded guilty to, a crime of child molestation, rape, or any other form of sexual assault.

SEC. 706. PROHIBITION ON LOBBYING.

Nothing in this Act shall be construed to supercede section 1913 of title 18, United States Code.

The CHAIR. Pursuant to House Resolution 1344, the gentleman from Tennessee (Mr. GORDON) and a Member opposed each will control 20 minutes.

The Chair recognizes the gentleman from Tennessee.

Mr. GORDON of Tennessee. Madam Chairman, I yield myself such time as I may consume.

The amendment I am offering today makes a handful of technical and clarifying changes and a few substantive additions to the underlying bill. Most of the changes were the result of negotiations with our Republican colleagues following our full committee markup. We had agreed to work out several issues during the markup, so let me tell you about those agreements first.

Mr. NEUGEBAUER, who wished to ensure that we were leveraging as much private funds as we could in implementing the Noyce Teacher Scholarship Program, I agreed to split the match requirement into two categories. The result is that small institutions are also able to participate in this critical program to train STEM teachers, and the large institutions can more easily raise match funds and stretch Federal dollars even further.

There was agreement between Dr. LIPINSKI and Mr. INGLIS on the prize program in section 228. They found a good way to make sure that there would not be double-dipping into Federal funds in order to carry out the prize-winning research.

Mr. OLSON requested some changes in the ARPA–E language, and we went ahead, as agreed, and made those changes in this amendment.

Mrs. BIGGERT had some concerns about the Energy Innovation Hubs and wanted to make sure that the consortia utilized existing facilities when possible, so we made those constructive changes for her.

The amendment also included language to clarify the application of existing law which prohibits the use of funding appropriated to programs in the underlying bill for lobbying. I want to thank Dr. BROUN for his passion on this issue and for working with me to make this clarification.

Finally, this amendment also includes a clarifying change requested by Dr. BARTLETT for one of his own amendments in committee on STEM internships.

The amendment also adds one new section to the bill. This section requires the Director of NIST to submit a report to Congress examining the use of high-performance computation modeling and simulation by small- and medium-sized manufacturers. There is great potential in the use of high-performance computing resources by small- and medium-sized manufacturers, but their use is relatively limited. This study would look at the current utilization of these resources, examine the existing barriers to their use, and make recommendations for addressing these barriers. I want to thank Chairman WU, Chairman LIPINSKI, and Congressman GARAMENDI for their interest in this issue and for helping to draft this provision.

Now let me talk about a part of the manager's amendment that I think will be a topic of discussion on both sides of the aisle today. Mr. HALL rightfully wanted to do something for veterans in this bill. He offered an amendment to

the committee that gave veterans preference when applying for any scholarships or fellowships authorized under this bill, and the amendment was happily accepted unanimously in the committee.

He also offered an amendment to help disabled veterans who want to pursue STEM studies. I know Mr. HALL was trying to do the right thing, but when we read the language, we didn't think the amendment actually helped disabled veterans in the way Mr. HALL intended. So we had some discussion in the committee, and in the end we decided to accept the amendment as is but continue to work together heading to the floor.

Staff traded several versions of language back and forth over the next 10 days. I talked to my staff, Mr. HALL talked with his staff, and, unfortunately, we could not come up with agreement on which language would be most helpful to our common goal of helping disabled veterans without causing other unintended consequences.

Our shared goal is to encourage and incentivize colleges and universities to provide STEM programs to disabled veterans and to recruit more disabled veterans into those programs by giving them special consideration in the review of proposals when they do. However, we have to be careful not to dilute the notion of special consideration so far that every institution in the country can qualify. If everyone is special, no one is special.

We also want to hold institutions accountable for serving their disabled veterans in their STEM programs. If we give them special consideration without holding them accountable, there is no incentive to actually make sure that veterans get the benefits of the Federal grant funds. Unfortunately, every sincere effort of pro-veteran language that we made was rejected.

Once again, where is the accountability? How do we know that a single disabled veteran student is benefiting from Federal STEM programs because the institution has this designation? We don't. That is the problem with the language.

It is unfortunate that we could not come to agreement. But in the end, we took Mr. HALL's latest offer with only small changes and included it in the manager's amendment. I still think we can do so much better for disabled veterans. Our language may be improved from Mr. HALL's language, but it still doesn't go nearly as far as I would like it to go in holding institutions accountable. I hope to continue to work with Mr. HALL to make sure that we have this accountability as we move forward.

Finally, we borrowed language from our colleagues on the other side of the aisle to ensure that no funds authorized under this bill can go to child molesters. This is a straightforward amendment incorporating a few suggestions from my colleagues and a small number of other changes to make the bill better, and I urge its adoption.

I reserve the balance of my time.

Mr. HALL of Texas. Madam Chair, I rise to claim the time in opposition to the amendment, although I do not intend to oppose it.

The CHAIR. Without objection, the gentleman is recognized for 20 minutes.

There was no objection.

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Mr. HALL of Texas. The manager's amendment reflects many things, from technical changes, recommendations from outside groups, agreements reached between our side of the aisle and theirs, and items that as the majority they're able to add unilaterally.

I want to thank the chairman for working with our Members on agreed-upon changes between the full committee markup and now, including the non-Federal matching requirements under the Noyce Scholarship Program, clarifying language on STEM Industry Internships program and the NSF Innovation Prize pilot program, reinstating the cap on the maximum number of ARPA–E employees, and instituting a prohibition on lobbying in the act. I only wish we could have continued the good, open dialogue this past week, particularly with our concerns.

I remain disappointed that the veterans with disabilities language that was agreed to unanimously by voice vote at the full committee markup has been greatly modified in the manager's amendment. I believe if the chairman is sincere he will continue to work with us on this language as we move forward because I do strongly feel that the language in this amendment greatly weakens the intent of the underlying bill.

I also want to express my concern regarding the amendment's modification of language to the new loan guarantee program created by the bill. Specifically, the amendment strikes language in the underlying bill directing the Attorney General to take appropriate actions to recover unpaid principal and interest on loans that go into default. Removal of that language is a major concern as it's key to protecting taxpayers from bad loans. Given the events of the last couple of years I'd hope that the government's beginning to learn something about bad loans. But I'm concerned that with the removal of this very standard provision that we could be setting the loan guarantee program up for guaranteed failure.

I reserve the balance of my time.

Mr. GORDON of Tennessee. Madam Chairman, I yield 2 minutes to the gentlelady from California (Ms. WOOLSEY), a very active member of our committee and a champion for women and minorities.

Ms. WOOLSEY. Madam Chair, I rise today in strong support of H.R. 5116, the America COMPETES Reauthorization Act. I want to commend Chairman GORDON for his hard work in bringing this bipartisan bill to the floor, and I want to thank Ranking Member HALL for his help and his cooperation.

I believe in science, and I believe that with enough support, our scientists can solve almost any problem put in front of them. But, Madam Chairwoman, at the end of the day, this bill is about jobs, investments in basic and applied research, green manufacturing jobs, high-risk, high-reward technologies that lay the groundwork for a clean energy economy and create thousands of new jobs in the United States of America, jobs that we will have a workforce prepared to fill because a central piece of this effort encourages more girls and unrepresented minorities to become involved in science, technology, engineering and math—STEM—education at the K through 12, undergraduate, and graduate levels. So then those students will be able to choose a STEM career.

I'm pleased that this bill includes STEM provisions because without bringing women and minorities into the workforce with high tech engineering and math education, we won't have the workforce we need to compete worldwide.

So, Madam Chairman, H.R. 5116 supports these innovations that will not only change the way we generate energy but will also leave a cleaner and healthier world for our children and for our grandchildren.

So I urge my colleagues to join me and support Chairman GORDON and Ranking Member HALL in green jobs by voting for H.R. 5116.

Mr. HALL of Texas. Mr. Chairman, I reserve the balance of my time.

Mr. GORDON of Tennessee. Mr. Chairman, I yield 2 minutes to a valued member of the Science and Technology Committee from Michigan (Mr. PETERS).

Mr. PETERS. Mr. Chairman, I rise today in support of the America COMPETES Act. This bill will enhance our Nation's competitiveness, bolster research and science education, and support the needs of small businesses and America's 21st century manufacturing sector.

Small businesses have created nearly two out of three new jobs in our country in the past 15 years. Small businesses will fuel our economic growth, and small and midsize manufacturers are particularly important to creating substantial job growth. Manufacturing accounts for more than half of total U.S. exports and provides millions of people with well-paying jobs. A healthy manufacturing base is critical to the security of the American middle class and must be a key component of our economic security.

In order to maintain competitiveness in an increasingly competitive global marketplace, U.S. manufacturers must adapt to new technological developments and economic changes. The COMPETES Act does just that by providing critical support to the Manufacturing Extension Partnership, a highly

efficient initiative which has spurred 57,000 jobs and $10.5 billion in sales per year. The MEP requires matching investments from states and participating small businesses, but as a long and deep recession continues to take its toll, states like Michigan and many businesses have found it increasingly difficult to continue to meet the cost-share requirements to participate in the program. The COMPETES Act reduces this burden to allow struggling businesses to remain active in the program. Reducing small business costs and continuing an effort proven to create jobs make good sense. I'm grateful to my friend, Congressman EHLERS, for working with me on this bipartisan idea, and to Chairman GORDON and Ranking Member HALL, and Chairman WU and Ranking Member SMITH on the subcommittee, who supported including MEP support in the final bill. In addition to supporting MEP, COMPETES supports broad manufacturing initiatives such as providing new loan guarantees to help manufacturers access capital and supporting manufacturing R&D. I hope my colleagues will join me in supporting this bipartisan legislation that strengthens American manufacturing and competitiveness.

Mr. HALL of Texas. Mr. Chairman, I continue to reserve the balance of my time.

Mr. GORDON of Tennessee. Mr. Chairman, I yield 2 minutes to the gentleman from Texas (Mr. HINOJOSA).

Mr. HINOJOSA. Mr. Chairman, I rise today to urge my colleagues to support H.R. 5116, the America COMPETES Act.

Chairman GORDON, I commend you and the members of the House Science and Technology Committee for bringing this legislation to the floor.

More than ever, our Nation must invest in the scientific and technological building blocks that bolster American competitiveness in the 21st Century global economy. The America COMPETES Reauthorization Act of 2010 achieves this and more by fostering innovation, supporting manufacturers and industry, preparing a STEM workforce, and creating jobs.

I want to recognize Representatives EDDIE BERNICE JOHNSON, BEN RAY LUJÁN, SILVESTRE REYES, co-chair of the Diversity and Innovation Caucus, and other members of the Tri-Caucus for their outstanding leadership in championing diversity issues in this bill. This bill represents a great leap forward in broadening the participation of underrepresented minorities and women in the STEM fields.

As subcommittee chairman for Higher Education, Lifelong Learning, and Competitiveness, I am pleased that America COMPETES will more fully integrate our Nation's minority-serving institutions into research partnerships and Federal programs.

This bill complements our work on the Student Aid and Fiscal Responsibility Act known as SAFRA and our efforts to improve science and math literacy in our Nation's public schools.

In 2007, I introduced the Partnerships for Access to Laboratory Science Act, known as PALS, because our high schools needed to be properly equipped to provide low-income and minority students with laboratory experiences that will foster their talents and lifelong interests in science.

There is no doubt that we must redouble our efforts to engage young people in the STEM fields early on in their academic careers. I applaud Chairman GORDON and the committee for including this program in H.R. 5116.

I urge my colleagues to support the America COMPETES Act. Our Nation's future competitiveness depends on it.

Mr. HALL of Texas. Mr. Chairman, I yield back the balance of my time.

Mr. GORDON of Tennessee. Mr. Chairman, I yield myself such time as I may consume. And I just want to briefly inform my friend, Mr. HALL, that I share his interest in finding a way to run down any defaults and collect those. We were told that our committee didn't have jurisdiction to require the Attorney General to do that. Let us continue to work together to find ways to accomplish what we both want to do.

I have no further requests for time, Mr. Chairman, and I yield back the balance of my time.

The Acting CHAIR (Mr. CAPUANO). The question is on the amendment offered by the gentleman from Tennessee (Mr. GORDON).

The question was taken; and the Acting Chair announced that the ayes appeared to have it.

Mr. GORDON of Tennessee. Mr. Chair, I demand a recorded vote.

The Acting CHAIR. Pursuant to clause 6 of rule XVIII, further proceedings on the amendment offered by the gentleman from Tennessee will be postponed.

AMENDMENTS EN BLOC NO. 1 OFFERED BY MR. GORDON OF TENNESSEE

Mr. GORDON of Tennessee. Mr. Chair, I have amendments en bloc at the desk.

The Acting CHAIR. The Clerk will designate the amendments en bloc.

Amendments en bloc No. 1 offered by Mr. GORDON of Tennessee consisting of amendments numbered 3, 4, 5, 11, 18, 19, 20, 25, 27, 39 and 47 printed in part B of House Report 111–479:

AMENDMENT NO. 3 OFFERED BY MS. MATSUI OF CALIFORNIA

The text of the amendment is as follows:

Page 242, line 17, insert ", including through Smart Grid technologies" after "conventional technologies".

AMENDMENT NO. 4 OFFERED BY MS. MATSUI OF CALIFORNIA

The text of the amendment is as follows:

Page 215, line 11, insert ", including the development of smart grid technologies" after "efficiency programs".

AMENDMENT NO. 5 OFFERED BY MR. WU OF OREGON

The text of the amendment is as follows:

Page 229, line 9, after "other transactions." insert "The Director shall make awards designed to overcome the long-term and high-risk barriers relating to the goals and means set forth in subsection (c) and facilitate submissions, where possible by small businesses and entrepreneurs, pursuant to announcements published not less frequently than annually, of funding opportunities for—

"(1) specific areas of technological innovation; and

"(2) broadly defined areas of science and technology,

to remain open for periods of one year.".

AMENDMENT NO. 11 OFFERED BY MRS. MCCARTHY OF NEW YORK

The text of the amendment is as follows:

Page 172, line 10, strike "and" after the semicolon.

Page 172, line 14, strike the period and insert "; and".

Page 172, after line 14, insert the following:

(3) incorporate and build upon existing reports and studies on improving emergency communications.

AMENDMENT NO. 18 OFFERED BY MS. CLARKE OF NEW YORK

The text of the amendment is as follows:

Page 137, line 3, insert "including by women and underrepresented minority students," after "and participation,".

AMENDMENT NO. 19 OFFERED BY MR. COHEN OF TENNESSEE

The text of the amendment is as follows:

Page 149, after line 21, insert the following new section:

SEC. 305. SENSE OF CONGRESS.

It is the Sense of Congress that—

(1) in order to maintain our Nation's competitiveness, we must improve the quality of STEM education in the Nation;

(2) the incorporation of engineering education at the elementary and secondary levels has the potential to improve student learning and achievement in science and mathematics, and to increase the technological literacy of all students;

(3) formal and informal educational providers, including K–12 schools, should integrate engineering design principles into their curriculum; and

(4) exposing elementary and secondary students to engineering education can expand students' understanding of engineering and their awareness of career opportunities in these fields.

AMENDMENT NO. 20 OFFERED BY MR. CUELLAR OF TEXAS

The text of the amendment is as follows:

Page 101, after line 2,1 insert the following new subsection:

(e) OUTREACH.—In carrying out the program under this section, the Director shall conduct outreach efforts to encourage applications from underrepresented groups.

Page 106, after line 12, insert the following new subsection:

(g) OUTREACH.—In carrying out the program under this section, the Director shall conduct outreach efforts to encourage applications from underrepresented groups.

AMENDMENT NO. 25 OFFERED BY MR. HONDA OF CALIFORNIA

The text of the amendment is as follows:

Page 132, line 7, strike "and".

Page 132, line 12, strike the period at the end and insert "; and".

Page 132, after line 12, insert the following:

(5) facilitating improved coordination between federally supported STEM education programs and activities and State level activities, including the efforts of P-16 and P-20 councils in the States.

(d) DEFINITIONS.—For purposes of this section:

(1) P-16.—The term ''P-16'' refers to a system of education that encompasses preschool through undergraduate level education.

(2) P-20.—The term ''P-20'' refers to a system of education that encompasses preschool through graduate level education.

AMENDMENT NO. 27 OFFERED BY MS. JACKSON LEE OF TEXAS

The text of the amendment is as follows:

Page 126, line 14, strike ''and''.

Page 126, line 16, strike the period and insert the following: '', and an economic and ethnic breakdown of the participating students.''

AMENDMENT NO. 39 OFFERED BY MR. HARE OF ILLINOIS

The text of the amendment is as follows:

Page 149, after line 21, insert the following new section:

SEC. 305. SENSE OF CONGRESS.

For science, technology, engineering, and mathematics (STEM) education programs or activities authorized under this Act or amendments made by this Act, it is the sense of Congress that when more than 1 applicant is competing for the same grant and the applications from each applicant are considered equal in merit by the grant-awarding authority, the grant-awarding authority shall give additional consideration to any of the following:

(1) An applicant that has not previously received funding.

(2) An applicant that is an institution of higher education in a rural area.

AMENDMENT NO. 47 OFFERED BY MS. MOORE OF WISCONSIN

The text of the amendment is as follows:

Page 208, line 13, insert ''and the Great Lakes'' after ''including oceans''.

The Acting CHAIR. Pursuant to House Resolution 1344, the gentleman from Tennessee (Mr. GORDON) and the gentleman from Texas (Mr. HALL) each will control 20 minutes.

The Chair recognizes the gentleman from Tennessee.

Mr. GORDON of Tennessee. Mr. Chairman, let me say that this is a block of amendments that have been well scrutinized by I think the minority and the majority. We feel they are all good amendments.

I reserve the balance of my time.

Mr. HALL of Texas. Mr. Chairman, I rise in opposition to the en bloc amendments before us, although I do not intend to oppose them. All 11 of the amendments are noncontroversial, and we're generally supportive. I will not oppose these.

Mr. Chairman, I yield back the balance of my time.

Mrs. MCCARTHY of New York. Mr. Chair, I thank you and Ranking Member HALL for bringing forward this important bill, the America COMPETES Act.

Thanks to the passage of several pieces of legislation, namely the Recovery Act, rising unemployment rates have been curbed and economic indicators have shown signs of modest progress.

Make no mistake though we, as a nation, have a long ways to go to ensure both short and long-term economic stability and prosperity.

The America COMPETES Act represents an important step in that direction.

Research and innovation across various disciplines is an economic model our nation should live by.

I am proud to offer an amendment to the America COMPETES Act. My amendment ensures that a needs assessment required to improve the operation and reliability of emergency communication devices build upon conclusions and assessments of prior reports on the matter.

Events like the recent West Virginia mining tragedy and September 11th remind us all of the barriers we must cross technologically to ensure that emergency communication systems are able to perform in times of distress.

Most famously, the 9/11 Commission Report made explicit recommendations on the subject of emergency communication enhancement. As a New Yorker, not a day goes by that I do not think of the September 11th attacks and the barriers that stood in our way from potentially saving more lives.

It is imperative that research conducted on emergency communication build upon prior conclusions so that we, as a society, are better prepared to face the challenges any crisis may pose. Furthermore, avoiding duplicate work is pivotal to a properly directed innovation and research agenda.

My amendment is straightforward. It ensures that assessment in the field of emergency communications take into consideration apt reports and studies that have already been conducted on this matter of importance. With my amendment, we, as a nation, can ensure that mistakes and shortcomings in the field of emergency communication are learned from thus poising our nation's brave first-responders to save more lives.

I urge all my colleagues to support the amendment.

Mr. CUELLAR. Mr. Chair, I rise today to encourage my colleagues to support my amendment to the America COMPETES Reauthorization Act of 2010.

Many very qualified students can compete for the fellowships and scholarships if they are only made aware of them. This amendment would require the Director of the National Science Foundation to conduct outreach efforts to encourage increased applications from underrepresented groups. It is of utmost importance to give all individuals an opportunity at these programs.

The simple—but crucial—effort to make underrepresented groups a part of the process will serve to create a more diverse and representative workforce in the National Science Foundation's Postdoctoral Research Fellowships.

The challenges our nation faces in this century require that we have a highly-skilled and creative workforce trained in the areas of STEM (science, technology, engineering, and mathematics).

In the 21st century human advancement is closely linked in STEM fields. It is imperative that we create a broad pipeline of STEM professionals.

Our future leaders will need STEM skills to craft innovative policies on issues of national concern such as transportation, sustainability, healthcare, and national security.

Hispanic enrollment in colleges and universities has more than doubled over the past two decades (2010 University of Southern California study).

Hispanic participation in STEM fields at the higher education level has grown but it has not kept pace with their growth within the general population (USC).

Among Hispanics who enroll in four-year institutions, 36% indicate an intention to major in a STEM field.

I thank the distinguished Chairman for his work on this legislation, and consideration of this amendment.

We can harness this 21st century technology to bring these areas out of 19th century conditions.

Mr. Chairman, I applaud you on this important legislation, and I urge all my colleagues to vote ''yes'' on this amendment.

Mr. HONDA. Mr. Chair, I rise today in support of H.R. 5116, the America COMPETES Reauthorization Act. I commend Chairman BART GORDON and the other members of the Science and Technology Committee, on which I am proud to have once served, for the hard work and thoughtful consideration that went into this bill.

The America COMPETES Act of 2007 significantly bolstered American innovation, the most fundamental hope for sustainable economic growth and competitiveness in the United States and a critical driver of the economy of my Silicon Valley district. It helped drive new research and its commercialization, and encouraged the creation of a more dynamic business environment, and made improvements to science, technology, engineering and math (STEM) education that are important for our nation's long term economic health.

It is critical that we provide sustained support for scientific research and STEM education, or our ability to compete in the global economy will be put in jeopardy. As the Joint Economic Committee noted in a new report released today, basic research plays a critical role in sparking innovation, and it is prudent for the federal government to increase its basic research expenditures now. That is why I am proud to support H.R. 5116, which authorizes those much needed investments.

I am pleased that the bill includes provisions to ensure coordination of federal science, technology, engineering and mathematics (STEM) education activities by establishing a committee under the National Science and Technology (NSTC) to handle these activities. Providing this coordinating mechanism for the federal STEM education programs, along with requiring the development of a STEM education strategic plan and the submission of an annual report about the budget and activities of federal STEM education programs, is critical to strengthening these programs and ensuring America remains innovative and competitive in the 21st century the global economy.

For too long we have failed to ensure that the various agencies involved in STEM education efforts are aware of what is being done and what has already been done elsewhere. According to the Academic Competitiveness Council's (ACC) report, in 2006 the U.S. sponsored 105 STEM education programs at more

than a dozen different Federal Agencies. These programs devoted approximately $3.12 billion to STEM education activities spanning pre-kindergarten through postgraduate education and outreach. The report notes that many of these Agencies do not share information or work collaboratively on similar programs, demonstrating a need for better coordination.

The STEM education coordination provisions of this bill are similar to those included in my own bill, the Enchancing Science, Technology, Engineering, and Mathematics Education (E–STEM) Act, H.R. 2710. To incorporate another element from H.R. 2710 into America COMPETES, stimulating collaboration between the federal and state levels throughout the nation, I have offered an amendment to the bill to make it the responsibility of the STEM Education Advisory Committee created in the bill to facilitate improved coordination between federally supported STEM education programs and state level activities, including P–16 and P–20 councils.

I am also pleased that H.R. 5116 contains a reauthorization of the National Nanotechnology Initiative that incorporates numerous provisions that I originally proposed in my own legislation, the Nanotechnology Advancement and New Opportunities (NANO) Act, H.R. 820.

Both bills seek to focus America's nanotechnology research and development programs on areas of national need such as energy, health care, and the environment, and have provisions to help assist in the commercialization of nanotechnology. They also require the development of a nanotechnology research plan that will ensure the development and responsible stewardship of nanotechnology by addressing uncertainty about the health and safety risks it might pose and support the development of educational tools and partnerships to help prepare students to pursue postsecondary education in nanotechnology.

Again, I congratulate the Science and Technology Committee and Chairman GORDON for their work on this bill and thank them for incorporating so many of the provisions from my bills and for accepting my amendment. I urge my colleagues to support this important legislation to ensure that our nation leads the world in innovation and science and technology.

Ms. JACKSON LEE of Texas. Mr. Chair, I rise in support of my amendment to H.R. 5116—"To invest in innovation through research and development, to improve the competitiveness of the United States, and for other purposes."

My amendment amends Section 345(e) to mandate the Director of the National Science Foundation (NSF) to report on the economic and ethnic breakdown of "Science Technology Engineering and Mathematics" (STEM) industry internship program recipients.

At present, this section mandates the Director of the NSF to submit a report to Congress on the number and total value of awards made under this section, the number of students affected by those awards, and any evidence of the effect of those awards on workforce preparation and jobs placement for participating students. In my opinion, requirements for assessing participation of minority and economically-disadvantaged backgrounds are conspicuously absent from these reporting requirements, and my amendment seeks to rectify this problem.

Mr. Chair, facilitating links between institutes of higher education and the private sector is vital to ensuring that education enables a skilled and relevant workforce. Such links are especially important for minorities and underserved communities because these students often lack alternative avenues to connect their education with an industry. Internship experience is an increasingly vital component of a successful résumé, yet the unpaid nature of internships is cost-prohibitive for many people.

As I mentioned, this amendment would mandate that the Director of the National Science Foundation (the organization that oversees this program) report on the economic and ethnic breakdown of this program's recipients. Such data will be useful to ensure that minorities and economically-disadvantaged students have adequate access to internships that bridge STEM academia and industry. Indeed, I trust that this data will provide evidence of robust participation by minority and economically-disadvantaged students; however, if such students are not participating, these reporting requirements will provide Congress with the data it needs to facilitate broad participation.

Thank you again. I urge my colleagues to support this simple but important resolution.

Mr. GORDON of Tennessee. Mr. Chair, I have no further requests for time, and I yield back the balance of my time.

The Acting CHAIR. The question is on the amendments en bloc offered by the gentleman from Tennessee (Mr. GORDON).

The amendments en bloc were agreed to.

AMENDMENT NO. 6 OFFERED BY MR. HALL OF TEXAS

The Acting CHAIR. The Chair understands that amendment No. 2 will not be offered at this time.

It is now in order to consider amendment No. 6 printed in part B of House Report 111–479.

Mr. HALL of Texas. Mr Chairman, acting as the designee of Mr. BROUN of Georgia, I have an amendment at the desk.

The Acting CHAIR. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 6 offered by Mr. HALL of Texas:

Strike title V.

The Acting CHAIR. Pursuant to House Resolution 1344, the gentleman from Texas (Mr. HALL) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Texas.

Mr. HALL of Texas. Mr. Chairman, I rise to support this amendment. The amendment would simply strike title V of this bill, which creates bigger government and calls for more spending in areas that go well beyond research and development and authorize potentially inappropriate and duplicative programs.

In particular, I want to note our strong objection to the Regional Innovation Clusters program that's created by title V. Not only does it fund activity well beyond R&D, the language is so loosely written that virtually any type of industry would be eligible to undertake virtually any type of activity. The bill would reduce funding available for high priority R&D programs at the Department of Commerce, such as those at NIST.

I strongly support this amendment and urge its adoption.

I reserve the balance of my time.

Mr. GORDON of Tennessee. Mr. Chair, I rise in opposition to the amendment.

The Acting CHAIR. The gentleman is recognized for 5 minutes.

Mr. GORDON of Tennessee. Mr. Chair, Dr. BROUN is a valued member of our committee. We've had a number of discussions, as he's been very active. We agree on some things, we don't agree on others. We compromise on some. This is one that we were not able to come to agreement on.

All the provisions, and what this would do is this would strike the title V of this bill. All provisions in title V are aimed at looking at creating real world economic value for research and development.

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Title V includes three important provisions to help spur innovation in this country. It creates a loan guarantee program at the Department of Commerce for small- and medium-sized manufacturers seeking to innovate and retool for the 21st century to remain globally competitive. It establishes an Office of Innovation and Enterprise at the Department of Commerce to help turn the good ideas into new businesses, leading to economic growth and job creation. And, finally, it establishes a Regional Innovation Program at the Department of Commerce to empower local communities to leverage regional strengths to promote innovation.

This is a good bill, but this amendment would take away from the bill.

I yield back the balance of my time.

Mr. HALL of Texas. Mr. Chairman, I would like to support this amendment. The amendment would simply strike title V of this bill, which creates bigger government and calls for more spending.

I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentleman from Texas (Mr. HALL).

The question was taken; and the Acting Chair announced that the noes appeared to have it.

Mr. HALL of Texas. Mr. Chair, I demand a recorded vote.

The Acting CHAIR. Pursuant to clause 6 of rule XVIII, further proceedings on the amendment offered by the gentleman from Texas will be postponed.

AMENDMENT NO. 7 OFFERED BY MR. GORDON OF TENNESSEE

The Acting CHAIR. It is now in order to consider amendment No. 7 printed in part B of House Report 111–479.

Mr. GORDON of Tennessee. Mr. Chair, I rise as the designee for Mr. BOSWELL and Mr. MICHAUD and have an amendment at the desk.

The Acting CHAIR. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 7 offered by Mr. GORDON of Tennessee:

Page 133, line 25, strike ''and''.

Page 134, after line 1, insert the following new clause:

''(vii) biomass technology systems; and''.

Page 135, line 23, strike ''and''.

Page 135, after line 25, insert the following new clause:

''(vii) biomass technology systems; and''.

The ACTING CHAIR. Pursuant to House Resolution 1344, the gentleman from Tennessee (Mr. GORDON) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Tennessee.

Mr. GORDON of Tennessee. Mr. Chairman, I yield myself such time as I may consume.

Mr. Chairman, this amendment once again has been before the public, well scrutinized. It would ensure that the biomass technology systems and related courses are included in the list of fields that would be encompassed by the energy systems science and engineering education programs at the Department of Energy.

I reserve the balance of my time.

Mr. HALL of Texas. Mr. Chairman, I rise to claim time in opposition to this amendment, although I do not intend to oppose it.

The Acting CHAIR. Without objection, the gentleman is recognized for 5 minutes.

There was no objection.

Mr. HALL of Texas. I have no objection to the amendment. I reserve the balance of my time.

Mr. GORDON of Tennessee. Mr. Chair, I yield such time as he may consume to the gentleman from Iowa (Mr. BOSWELL), the author of this very good amendment.

(Mr. BOSWELL asked and was given permission to revise and extend his remarks.)

Mr. BOSWELL. Mr. Chairman, I hope I convinced the ranking member. I appreciate your hard work. You have been doing some excellent work for all of us, for our country, for our future.

The COMPETES reauthorization provides for important investments in STEM education that I believe will move our students and Nation forward. I have always held that education and innovation are two of the best investments we can make, for they guarantee a turnaround and are proven to enhance the quality of life for all Americans. This legislation will bring greater innovation and stability to our institutions of education at all levels and to our Nation's economic vitality.

This amendment, which I am proud to offer with Mr. MICHAUD, makes a very simple and very important modification to the COMPETES reauthorization. This amendment ensures that when the Department of Energy assists in the expansion of energy-related courses or degree programs that biomass technology systems education can be utilized. It will guarantee that the grants, scholarships, and training programs offered under this program can be used by students and schools that are moving us forward in the study and business of biomass technology systems.

Biomass production is an important component of our economy and energy security that we must foster. We all know very well the importance of biofuels and its benefits to our environment and our national security by ending our dependence on foreign oil. My constituents in Iowa have experienced the successes of ethanol biodiesel. However, corn-based ethanol is just one piece of the larger puzzle. We're seeing great advances in alternative fuels and increased production of native plants that can be reaped for maximum energy use.

My home State of Iowa continues to play a critical role in the development of the biomass industry in the United States. As leaders in agriculture, we have access to the resources and expertise to produce advanced biofuels, biopower, and bioproducts. Many young minds at various schools in Iowa are moving forward to study the production of biomass, how to maximize the use of alternative fuels and produce plants that maximize the best return possible when harnessed for their energy.

Supporting this amendment will ensure that this technology can expand across our great Nation, and it will affirm for our researchers, students, teachers, and scientists that they can move forward with this innovation and bring us closer to a Nation that is reliant on its own resources and not on OPEC. So I encourage my colleagues to support this amendment and vote on behalf of students, innovation, and energy dependence.

Mr. HALL of Texas. Mr. Chairman, I yield back the balance of my time.

Mr. GORDON of Tennessee. Mr. Chairman, it is a good amendment, and I suggest its approval. I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentleman from Tennessee (Mr. GORDON).

The amendment was agreed to.

AMENDMENT NO. 8 OFFERED BY MR. GORDON OF TENNESSEE

The Acting CHAIR. It is now in order to consider amendment No. 8 printed in part B of House Report 111–479.

Mr. GORDON of Tennessee. Mr. Chair, I rise as designee for Mr. DAVIS of Illinois, and I have an amendment at the desk.

The Acting CHAIR. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 8 offered by Mr. GORDON of Tennessee:

Page 69, line 18, insert '', disaggregated and cross-tabulated by race, ethnicity, and gender,'' after ''subparagraph (B)''.

Page 80, line 19, insert '', disaggregated and cross-tabulated by race, ethnicity, and gender'' after ''United States''.

Page 86, after line 5, insert the following new subsection:

(c) REPORT.—Not later than one year after the date of enactment of this Act, the Director shall provide a report to Congress on institutional research partnerships identified in subsection (a) funded in the previous fiscal year.

Page 124, line 21, strike ''undergraduate students'' and insert ''students enrolled in certificate, associate, or baccalaureate degree programs''.

Page 128, line 21, strike ''; and'' and insert a semicolon.

Page 128, after line 25, insert the following new subparagraph:

(E) describe the approaches that will be taken by each agency to increase the participation of underrepresented minority groups in STEM studies and careers both for programs specifically designed to broaden participation and for all programs in general, including by providing for programs and activities that increase participation by individuals in these groups at all institutions, and by increasing the engagement of Historically Black Colleges and Universities and minority-serving institutions in the STEM education and outreach activities supported by the agencies; and

Page 149, after line 21, insert the following new section:

SEC. 305. NATIONAL ACADEMY OF SCIENCES REPORT ON STRENGTHENING THE CAPACITY OF 2-YEAR INSTITUTIONS OF HIGHER EDUCATION TO PROVIDE STEM OPPORTUNITIES.

Not later than 6 months after the date of enactment of this Act, the Office of Science and Technology Policy shall enter into a contract with the National Academy of Sciences to carry out a study evaluating the role of 2-year institutions of higher education as STEM educators, including in the preparation of students for direct entry into the STEM workforce and in preparation of students for transition into 4-year STEM degree programs, as well as the role of the Federal Government in helping 2-year institutions of higher education build their capacity to be effective STEM educators. At a minimum, the report shall include—

(1) an evaluation of the current capacity of 2-year institutions of higher education to be effective STEM educators, including in the preparation of students for direct entry into the STEM workforce and for transition into 4-year STEM degree programs;

(2) a description of existing challenges to expanding opportunities for 2-year institutions of higher education to provide and enhance STEM learning and provide STEM degrees that prepare students well for direct entry into the STEM workforce or for transition into 4-year degree programs;

(3) identification and description of Federal programs that have successfully strengthened the capacity of 2-year institutions of higher education to provide and enhance STEM opportunities;

(4) a recommendation or recommendations regarding how Federal agencies should set priorities for supporting STEM education at 2-year institutions of higher education;

(5) a recommendation or recommendations regarding ways Federal agencies can provide increased opportunities for 2-year institutions of higher education to participate across their portfolios of STEM education and research programs, including—

(A) ways to engage 2-year institution of higher education faculty and students with research experiences;

(B) strategies for improving the curriculum and teaching of developmental mathematics given that many 2-year institutions of higher education provide remediation in mathematics and other STEM coursework; and

(C) enhancing the basic scientific laboratory infrastructure; and

(6) a recommendation or recommendations regarding the need for and appropriateness of new Federal programs in support of STEM education at 2-year institutions of higher education.

The Acting CHAIR. Pursuant to House Resolution 1344, the gentleman from Tennessee (Mr. GORDON) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Tennessee.

Mr. GORDON of Tennessee. Mr. Chairman, I yield myself such time as I may consume.

Mr. DANNY DAVIS' amendment will ensure that the students enrolled in 2-year, certificate, associate, or baccalaureate programs are eligible for STEM programs. It would also call for a report of agency approaches to increase minority participation in STEM careers.

Once again, Mr. Chairman, this has been well reviewed. This is a good amendment, and I would recommend it for passage.

I reserve the balance of my time.

Mr. HALL of Texas. Mr. Chairman, I rise to claim time in opposition to this amendment.

The Acting CHAIR. The gentleman is recognized for 5 minutes.

Mr. HALL of Texas. I am not sure that we really and truly need to fund yet another study, this one to look at 2-year colleges. But I have a bigger concern with the difficulty of requiring NSF to organize data that it's merely reported. The universities collect this data, and it's my understanding that there would be various issues with even having them do what this amendment proposes.

Mr. Chairman, I reserve the balance of my time.

Mr. GORDON of Tennessee. Mr. Chairman, I yield such time as he may consume to the author of this amendment, Mr. DAVIS of Illinois.

Mr. DAVIS of Illinois. Mr. Chairman, first of all I want to thank Chairman GORDON and Ranking Member HALL of the Science and Technology Committee for their work to develop and promote policies to strengthen our Nation's competitiveness in STEM. In particular, I applaud the chairman for his leadership in broadening the participation of individuals and institutions that are underrepresented in STEM. You and your staff actively engaged with me and other members of the Congressional Black Caucus to listen to and address our concerns, and we appreciate that. I also want to recognize and thank Dahlia Sokolov on your staff for sharing her expertise and for being so responsive.

H.R. 5116 includes multiple provisions that respond to concerns raised by multiple reports, STEM experts, and Members of the Congress that stronger efforts to broaden participation are critical to meeting the growing demand for U.S. workers with STEM skills and to improve American competitiveness globally. The amendment that I offer, along with my colleagues Congressman GRIJALVA, Congressman HONDA, and Congressman KILDEE, builds upon the existing provisions of the bill to further increase the access of minority students to, and the capacity of, minority institutions to provide STEM opportunities.

I am pleased that this amendment is supported by multiple higher education organizations, including the American Association of Community Colleges, the Hispanic Association of Colleges and Universities, the Institute for Higher Education Policy, the National Association for Equal Opportunity in Higher Education, the Presidents and Chancellors of the 1890 Universities, the Thurgood Marshall College Fund, and the United Negro College Fund.

Again, I want to thank Chairman GORDON and Ranking Member HALL for their cooperative responsiveness and the tremendous work that they have done on behalf of all Americans to make us the most competitive Nation that we can possibly be.

I want to thank Chairman GORDON and Ranking Member HALL of the Science and Technology Committee for their work to develop and promote policies to strengthen our nation's competitiveness in science, technology, engineering and mathematics. In particular, I applaud the Chairman for his leadership in broadening the participation of individuals and institutions that are underrepresented in STEM. You and your staff actively engaged with me and other Members of the Congressional Black Caucus to listen to and address our concerns. I want to recognize and thank Dahlia Sokolov on your staff for sharing her expertise and for being so responsive.

According to the Census Bureau, 39 percent of the population under the age of 18 is a racial or ethnic minority. Yet, in 2003, only 4.4 percent of U.S. science and engineering jobs were held by African Americans and only 3.4 percent by Hispanics. Further, women represent only a little more than one quarter of our science and technology workforce. Although Historically Black Colleges and Universities represent only 3 percent of our nation's colleges, they graduate 40 percent of African Americans with degrees in STEM areas and 60 percent of African Americans with degrees in engineering; yet, they receive only about 1 percent of all federal R&D support. Many experts maintain that the ability of the US to produce enough scientists will fall far short unless we take strong action to develop the potential of women and minorities. Thus, broadening participation efforts are critical to meeting the growing demand for U.S. workers with STEM skills and to improving American competitiveness globally.

H.R. 5116 includes multiple provisions that respond to concerns raised by multiple reports, STEM experts, and Members of the Congress about the need to broaden participation of individuals and institutions that are underrepresented in STEM fields. The amendment that I offer along with my colleagues Congressman GRIJALVA, Congressman HONDA, and Congressman KILDEE builds upon the existing provisions in the bill to further increase the access of minority students to and the capacity of minority institutions to provide STEM opportunities.

I am pleased that this amendment is supported by multiple higher education organizations, including: The American Association of Community Colleges; The Hispanic Association of Colleges and Universities; The Institute for Higher Education Policy; The National Association for Equal Opportunity in Higher Education; The Presidents and Chancellors of the 1890 Universities; The Thurgood Marshall College Fund; and The United Negro College Fund.

Our amendment does five things.

First, it clarifies that the new STEM Education Strategic Plan will include a specific focus on broadening participation of individuals and institutions that are underrepresented in STEM. H.R. 5116 recognizes the need to coordinate STEM education efforts within the Executive Branch. Consistent with experts in STEM education, our amendment simply clarifies that the strategic plan for coordinating STEM education across the Executive Branch should have each agency identify steps it takes to broaden the participation.

Second, it includes a National Academy of Sciences report on strengthening the capacity of two-year institutions to provide STEM opportunities. The majority of Latino and African American students attend two-year colleges. Moreover, two-year institutions play an integral role in training STEM professionals through terminal and certification degrees as well as in preparing students to transfer to four-year institutions to complete STEM baccalaureate degrees. Thus, two-year institutions are a critical component of the STEM pipeline.

Although a few reports have examined the role of these institutions in a particular STEM discipline, no study has looked at comprehensively at two-year institutions with regard to STEM. A comprehensive analysis of how Federal agencies can provide increased opportunities for two-year institutions to participate across the portfolios of STEM education and research will do much to improve success of low income and minority students in STEM fields.

Third, our amendment strengthens the data collections related to STEM faculty and Federal research grants by ensuring the data are examined by race/ethnicity and gender. These data are important to assessing progress in broadening participation. Consistent with NSF data collections on students in STEM fields, the amendment simply ensures that these important data collections will be examined by race, ethnicity, and gender.

Fourth, the amendment strengthens the institutional research partnerships provision by including a reporting requirement on partnership grants. In order to ensure that partnerships among institutions are collaborative and equitable, H.R. 5116 requires NSF to award funds directly to institutional partners involved in a research collaboration funded at a level greater than $2 million. The amendment simply includes a report requirement so that we have a fuller understanding of the number and nature of such partnerships.

Finally, our amendment clarifies that undergraduates in two-year programs are eligible for the Undergraduates In Standard Research Grants. The amendment simply clarifies that students in certificate, associate, or baccalaureate degree programs qualify for research grants.

As I close, I thank the Chairman and Ranking Member again for their leadership. I

strongly encourage my colleagues to vote in favor of this amendment that will strengthen the bill's provisions to broaden participation.

Mr. HALL of Texas. Mr. Chairman, I yield back the balance of my time.

Mr. GORDON of Tennessee. I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentleman from Tennessee (Mr. GORDON).

The amendment was agreed to.

AMENDMENT NO. 10 OFFERED BY MR. MARKEY OF MASSACHUSETTS

The Acting CHAIR. It is now in order to consider amendment No. 10 printed in part B of House Report 111–479.

Mr. MARKEY of Massachusetts. I have an amendment at the desk.

The Acting CHAIR. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 10 offered by Mr. MARKEY of Massachusetts:

Page 195, after line 11, insert the following new section:

SEC. 504. CLEAN ENERGY CONSORTIUM.

(a) PURPOSE.—The Secretary shall carry out a program to establish a Clean Energy Consortium to enhance the Nation's economic, environmental, and energy security by promoting commercial application of clean energy technology and ensuring that the United States maintains a technological lead in the development and commercial application of state-of-the-art energy technologies. To achieve these purposes the program shall leverage the expertise and resources of the university and private research communities, industry, venture capital, national laboratories, and other participants in energy innovation to support collaborative, cross-disciplinary research and development in areas not being served by the private sector in order to develop and accelerate the commercial application of innovative clean energy technologies.

(b) DEFINITIONS.—For purposes of this section:

(1) CLEAN ENERGY TECHNOLOGY.—The term ''clean energy technology'' means a technology that—

(A) produces energy from solar, wind, geothermal, biomass, tidal, wave, ocean, and other renewable energy resources (as such term is defined in section 610 of the Public Utility Regulatory Policies Act of 1978);

(B) more efficiently transmits, distributes, or stores energy;

(C) enhances energy efficiency for buildings and industry, including combined heat and power;

(D) enables the development of a Smart Grid (as described in section 1301 of the Energy Independence and Security Act of 2007 (42 U.S.C. 17381)), including integration of renewable energy resources and distributed generation, demand response, demand side management, and systems analysis;

(E) produces an advanced or sustainable material with energy or energy efficiency applications; or

(F) improves energy efficiency for transportation, including electric vehicles.

(2) CLUSTER.—The term ''cluster'' means a network of entities directly involved in the research, development, finance, and commercial application of clean energy technologies whose geographic proximity facilitates utilization and sharing of skilled human resources, infrastructure, research facilities, educational and training institutions, venture capital, and input suppliers.

(3) CONSORTIUM.—The term ''Consortium'' means a Clean Energy Consortium established in accordance with this section.

(4) PROJECT.—The term ''project'' means an activity with respect to which a Consortium provides support under subsection (e).

(5) QUALIFYING ENTITY.—The term ''qualifying entity'' means each of the following:

(A) A research university.

(B) A State or Federal institution with a focus on the advancement of clean energy technologies.

(C) A nongovernmental organization with research or technology transfer expertise in clean energy technology development.

(6) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

(7) TECHNOLOGY DEVELOPMENT FOCUS.—The term ''technology development focus'' means the unique clean energy technology or technologies in which a Consortium specializes.

(8) TRANSLATIONAL RESEARCH.—The term ''translational research'' means coordination of basic or applied research with technical applications to enable promising discoveries or inventions to achieve commercial application of energy technology.

(c) ROLE OF THE SECRETARY.—The Secretary shall—

(1) have ultimate responsibility for, and oversight of, all aspects of the program under this section;

(2) select a recipient of a grant for the establishment and operation of a Consortium through a competitive selection process;

(3) coordinate the innovation activities of the Consortium with those occurring through other Department of Energy entities, including the National Laboratories, the Advanced Research Projects Agency—Energy, Energy Innovation Hubs, and Energy Frontier Research Collaborations, and within industry, including by annually—

(A) issuing guidance regarding national energy research and development priorities and strategic objectives; and

(B) convening a conference of staff of the Department of Energy and representatives from such other entities to share research results, program plans, and opportunities for collaboration.

(d) ENTITIES ELIGIBLE FOR SUPPORT.—A consortium shall be eligible to receive support under this section if—

(1) it is composed of—

(A) 2 research universities with a combined annual research budget of $500,000,000; and

(B) 1 or more additional qualifying entities;

(2) its members have established a binding agreement that documents—

(A) the structure of the partnership agreement;

(B) a governance and management structure to enable cost-effective implementation of the program;

(C) a conflicts of interest policy consistent with subsection (e)(1)(B);

(D) an accounting structure that meets the requirements of the Department of Energy and can be audited under subsection (f)(4); and

(E) that it has an External Advisory Committee consistent with subsection (e)(3);

(3) it receives funding from States, consortium participants, or other non-Federal sources, to be used to support project awards pursuant to subsection (e);

(4) it is part of an existing cluster or demonstrates high potential to develop a new cluster; and

(5) it operates as a nonprofit organization.

(e) CLEAN ENERGY CONSORTIUM.—

(1) ROLE.—The Consortium shall support translational research activities leading to commercial application of clean energy technologies, in accordance with the purposes of this section, through issuance of awards to projects managed by qualifying entities and other entities meeting the Consortium's project criteria, including national laboratories. The Consortium shall—

(A) develop and make available to the public through the Department of Energy's Web site proposed plans, programs, project selection criteria, and terms for individual project awards under this subsection;

(B) establish conflict of interest procedures, consistent with those of the Department of Energy, to ensure that employees and designees for Consortium activities who are in decisionmaking capacities disclose all material conflicts of interest, including financial, organizational, and personal conflicts of interest;

(C) establish policies—

(i) to prevent resources provided to the Consortium from being used to displace private sector investment otherwise likely to occur, including investment from private sector entities that are members of the Consortium;

(ii) to facilitate the participation of private entities that invest in clean energy technologies to perform due diligence on award proposals, to participate in the award review process, and to provide guidance to projects supported by the Consortium; and

(iii) to facilitate the participation of parties with a demonstrated history of commercial application of clean energy technologies in the development of Consortium projects;

(D) oversee project solicitations, review proposed projects, and select projects for awards; and

(E) monitor project implementation.

(2) DISTRIBUTION OF AWARDS.—The Consortium, with prior approval of the Secretary, shall distribute awards under this subsection to support clean energy technology projects conducting translational research, provided that at least 50 percent of such support shall be provided to projects related to the Consortium's clean energy technology development focus. Upon approval by the Secretary, all remaining funds shall be available to support any clean energy technology projects conducting translational research.

(3) EXTERNAL ADVISORY COMMITTEE.—

(A) IN GENERAL.—The Consortium shall establish an External Advisory Committee, the members of which shall have extensive and relevant scientific, technical, industry, financial, or research management expertise. The External Advisory Committee shall review the Consortium's proposed plans, programs, project selection criteria, and projects and shall ensure that projects selected for awards meet the conflict of interest policies of the Consortium. External Advisory Committee members other than those representing Consortium members shall serve for no more than 3 years. All External Advisory Committee members shall comply with the Consortium's conflict of interest policies and procedures.

(B) MEMBERS.—The External Advisory Committee shall consist of—

(i) 5 members selected by the Consortium's research universities;

(ii) 2 members selected by the Consortium's other qualifying entities;

(iii) 2 members selected at large by other External Advisory Committee members to represent the entrepreneur and venture capital communities; and

(iv) 1 member appointed by the Secretary.

(4) CONFLICT OF INTEREST.—The Secretary may disqualify an application or revoke funds distributed to the Consortium if the Secretary discovers a failure to comply with conflict of interest procedures established under paragraph (1)(B).

(f) GRANT.—

(1) IN GENERAL.—The Secretary shall make a grant under this section in accordance with section 989 of the Energy Policy Act of 2005 (42 U.S.C. 16353). The Secretary shall

award the grant, on a competitive basis, to 1 regional Consortium, for a term of 3 years.

(2) AMOUNT.—A grant under this subsection shall be in an amount not greater than $10,000,000 per fiscal year over the 3 years of the term of the grant.

(3) USE.—The grant distributed under this section shall be used exclusively to support project awards pursuant to subsection (e)(1) and (2), provided that the Consortium may use not more than 10 percent of the amount of such grant for its administrative expenses related to making such awards. The grant made under this section shall not be used for construction of new buildings or facilities, and construction of new buildings or facilities shall not be considered as part of the non-Federal share of a cost sharing agreement under this section.

(4) AUDIT.—The Consortium shall conduct, in accordance with such requirements as the Secretary may prescribe, an annual audit to determine the extent to which a grant distributed to the Consortium under this subsection, and awards under subsection (e), have been utilized in a manner consistent with this section. The auditor shall transmit a report of the results of the audit to the Secretary and to the Government Accountability Office. The Secretary shall include such report in an annual report to Congress, along with a plan to remedy any deficiencies cited in the report. The Government Accountability Office may review such audits as appropriate and shall have full access to the books, records, and personnel of the Consortium to ensure that the grant distributed to the Consortium under this subsection, and awards made under subsection (e), have been utilized in a manner consistent with this section.

(5) REVOCATION OF AWARDS.—The Secretary shall have authority to review awards made under this subsection and to revoke such awards if the Secretary determines that the Consortium has used the award in a manner not consistent with the requirements of this section.

The Acting CHAIR. Pursuant to House Resolution 1344, the gentleman from Massachusetts (Mr. MARKEY) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Massachusetts.

Mr. MARKEY of Massachusetts. Mr. Chairman, the amendment I am offering today, along with the gentlelady from California (Mrs. CAPPS), would add a new R&D program specifically focused on increasing our Nation's capacity to turn new innovations into new jobs. A clean energy consortium would be regionally based, selected by the Secretary of Energy through a competitive process, and include research universities, national labs, industry, and other State and nongovernmental organizations with expertise in clean energy development.

Moving to commercialize innovations in the clean energy sector is critical to our ability to compete for jobs with China and India. The faster we bring clean energy technologies to market, the faster we end our addiction to foreign oil from the Middle East. Our amendment will connect professors with producers, inventors with investors to move energy innovations out of the lab and into the factory.

Unlike research in biotech and defense, technology developed through energy R&D must break into a deeply entrenched market at a competitive cost in order to be successful. We need policies that can help overcome the valley of death where great ideas frequently stall before they have reached the critical proof-of-concept stage. That's what we do in this amendment.

We have worked with business, universities, and venture capital groups in developing this legislation. It has received endorsements from TechNet. The National Venture Capital Association has endorsed this amendment. The Clean Economy Networks, the companies across this country that want to focus on this energy sector, create millions of new jobs want this as part of the plan that we put together to make sure that it's not just research; it's research that turns into jobs rapidly in our country.

□ 1630

Mr. HALL of Texas. Mr. Chairman, I rise to claim time in opposition to this amendment.

The Acting CHAIR. The gentleman is recognized for 5 minutes.

Mr. HALL of Texas. This amendment creates a new program, as Mr. MARKEY has said, to pursue commercialization of clean energy technologies. This is not necessarily the problem.

We all agree that clean energy technologies are worth pursuing. The problem, however, is that the clean energy technology program created by this amendment is duplicative of another new program already in the bill, the Energy Innovation Hubs program, and I am opposed to the Hubs program because it is largely duplicative of existing DOE and R&D activities. So the amendment duplicates a program that's already duplicative itself.

Further, these programs are expensive and expand the bureaucracy within the Department of Energy, which is already too large. We need to be consolidating and streamlining DOE's many R&D programs, not creating new ones on top of new ones.

I strongly oppose this amendment, and I reserve the balance of my time.

Mr. MARKEY of Massachusetts. May I inquire of the Chair, how much time is remaining?

The Acting CHAIR. The gentleman from Massachusetts has 3 minutes remaining. The gentleman from Texas has 4 minutes remaining.

Mr. MARKEY of Massachusetts. At this point, I will yield to myself for 30 additional seconds.

This commercialization focus program complements existing R&D initiatives. Strong, long-term support for basic and applied research is critical to developing the scientific breakthroughs needed to meet our energy challenges, but additional focus on commercialization will help ensure that existing innovations and those further down the pipeline find a pathway to the market. It creates the link between R&D and economic development and job creation. Without it, I do not believe America can win in this sector.

I reserve the balance of my time.

Mr. HALL of Texas. Mr. Chairman, I reserve the balance of my time.

Mr. MARKEY of Massachusetts. I yield 1 minute to the gentlelady from California (Mrs. CAPPS).

Mrs. CAPPS. First of all, thank you, Chairman GORDON, for your great work on this bill. I want to thank my colleague, Mr. MARKEY, for your leadership on clean energy issues.

Mr. Chairman, I rise today in strong support of the Markey-Capps amendment, which is included in our legislation.

The Markey-Capps amendment would complement the clean energy advancement goals of the America COMPETES Act by creating a regional clean energy consortia program. This program will bring together regional networks of research universities, of national labs, of businesses and investors in the clean energy sector to accelerate the commercialization of new clean energy technologies.

They will also stimulate regional economic development and create jobs in places like the central coast of California, which I represent. The Green Coast Innovation Zone, GCIZ, in my district is built on this model and is eager to expand further into the clean energy sector. This provision will support their efforts to create high-quality green jobs that pay well and cannot be outsourced.

So I urge my colleagues to vote ''yes'' on the Markey-Capps amendment.

Mr. HALL of Texas. I reserve the balance of my time.

Mr. MARKEY of Massachusetts. Could the Chair please inform us of how much time is left.

The Acting CHAIR. The gentleman from Massachusetts has 1½ minutes. The gentleman from Texas has 4 minutes.

Mr. MARKEY of Massachusetts. Would it be possible for me to ask for the gentleman from Texas to draw down his time a little bit more before we come to the end of the speakers on the Democratic side?

Mr. HALL of Texas. Mr. Chairman, the clean energy consortia language, ''support collaborative cross-disciplinary research and development areas not being served by the private sector in order to develop and accelerate the commercial application of innovative clean energy technology,'' that's clearly duplicative. I've stated that in my opening remarks.

''Support multidisciplinary collaborative research development demonstration and commercial application of advanced energy technologies in areas not being served by the private sector.''

I think this is probably the most operative language for the two programs, and I do detect a difference.

I reserve the balance of my time.

Mr. MARKEY of Massachusetts. Mr. Chairman, I yield 30 seconds to the

chairman of the Science Committee, Mr. GORDON.

Mr. GORDON of Tennessee. Mr. Chairman, as I said earlier in the day, I don't want to trade Americans' dependency on foreign oil for Americans' dependency on foreign technology.

For us to get energy independence, there's going to be a variety of ways to go about it. Just like there's a variety of ways to skin a cat, this is one more way to get energy independence, and I support Mr. MARKEY's amendment.

Mr. HALL of Texas. I reserve the balance of my time.

Mr. MARKEY of Massachusetts. I yield 30 seconds to the gentlelady from Wisconsin (Ms. MOORE).

Ms. MOORE of Wisconsin. I thank the gentleman for yielding.

Mr. Chairman, I am in wholehearted support of this amendment and this bill.

I just wanted to speak briefly on the previous amendment that passed en bloc, which included a provision for which I am responsible. It included the Great Lakes. The Great Lakes are not just mere lakes; they are inland seas, and they contain the greatest source of freshwater on Earth. And despite their size, they are extremely vulnerable to stresses from environmental pollution, ecological alterations, and climate changes. In addition to that, they are a great source of economic development.

There are many unanswered research questions regarding the lakes' ecological stability. But there is already significant evidence that the climate of the Great Lakes region is changing: for example, water temperatures have been higher, and the duration of winter ice cover has declined.

These changes have a serious impact on the Great Lakes ecosystem—and the goods and services linked to the Lakes. To name just a few of the myriad potential effects:

Water temperatures are already rising, and almost all of the climate change scenarios predict further changes in temperature and precipitation. Lakes are very sensitive to climate in terms of the amount of precipitation and evaporation.

Precipitation changes are causing variation in water levels; most predictions are for lower levels but some predict higher levels.

Precipitation is predicted to increase but is predicted to come in fewer and more intense effects—in effect, a higher number of more intense rainstorms—which has a big impact on runoff from the lake, soil erosion, non-point pollution, and more.

Climate change is already affecting the population and distribution of fish and many other organisms; water level and temperature changes may also accelerate the accumulation of mercury and other contaminants.

When lake levels change, costs of shipping in the Great lakes increase, as do the costs of dredging harbors and channels, and adjusting docks and other infrastructure.

Climate change disrupts Great Lakes regional agricultural productivity (largely because of changes in the distribution of rain).

There is a dire need for comprehensive research on the impact of the environment on the Great Lakes region—now, not later. Waiting to begin managing the potential effects of climate change on the lakes only increases the ultimate expense, and the potential for irreversible damages.

If we act fast, we can take action to prevent some of the most damaging effects of climate change, and we an provide immediate relief in the form of cost savings, cleaner air and water, improved recreational opportunities, safeguarded environmental habitat, and improved quality of life for communities in the Great Lakes region.

We also must safeguard Lake Michigan—and in fact, all the Great Lakes—because of the Lakes' vital role these play in the region's economy. Lake Michigan is the lifeblood of the Milwaukee regional economy.

We have to use every tool in our toolbelt to ensure Lake Michigan's ecological stability—not only for the sake of environmental protection, but for the sake of our economic security—from tourism to manufacturing to fishing to shipping.

Southeastern Wisconsin is home to over more than 120 water-related businesses and five of the largest 11 water technology companies have significant presence in the area. UWM is home to the Great Lakes Water Institute, which is the largest research center of its kind on the Great Lakes. The Water Institute represents the only major aquatic research institution located on Lake Michigan and the largest U.S. institution of its kind in the Great Lakes region.

According to the EPA, today, there are approximately 37 million people living in the Great Lakes basin and more than 26 million of these people rely on the Great Lakes for their drinking water.

Shipping has been responsible for the development of the entire Great a Lakes Region.

Many manufacturing industries are attracted to the Great Lakes area because of the advantages of being near a water source which provides inexpensive electricity and convenient transportation routes.

The Journal Sentinel reports that there are 44,000 jobs directly tied to Great Lakes shipping, and nearly 200,000 jobs in the mining and steel industries that depend on the lakes' cargo.

Mr. HALL of Texas. Mr. Chairman, I would inquire of Mr. MARKEY if he has other speakers.

Mr. MARKEY of Massachusetts. I am now the last speaker, and I am going to reserve the balance of my time pending the completion.

The Acting CHAIR. The gentleman from Texas has the right to close.

Mr. MARKEY of Massachusetts. So how much time is remaining?

The Acting CHAIR. The gentleman from Texas has 3 minutes, and the gentleman from Massachusetts has 45 seconds.

Mr. MARKEY of Massachusetts. I yield myself the balance of my time.

Again, it is just to make this point that we must find a way in our country to have a plan. In China, on Monday they decide to do something, on Friday it starts to happen.

We need a plan. We need a plan to put together our inventors and our investors. We need a plan that puts together our professors with our producers. We need to find a way in which we telescope the timeframe it takes to create jobs in solar and wind and all of these new industries that have the potential of creating 2 million new jobs in our country or millions of jobs in China. That's our choice.

And if we don't take this opportunity, then young Americans are going to wonder in a few more years why we didn't put together a plan. That's what this amendment is. It's a pilot project, but it is one that will then have to be modeled in area after area around this country to ensure that we move fast to capture this renewable energy revolution that is very rapidly going to overtake this planet in the same way that the dot-com revolution did so in the 1990s.

Vote ''yes'' on the Markey-Capps amendment.

Mr. HALL of Texas. Mr. Chairman, I continue to oppose the amendment. It is duplicative of several other programs, and I urge my colleagues to oppose it.

I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentleman from Massachusetts (Mr. MARKEY).

The question was taken; and the Acting Chair announced that the ayes appeared to have it.

Mr. HALL of Texas. Mr. Chair, I demand a recorded vote.

The Acting CHAIR. Pursuant to clause 6 of rule XVIII, further proceedings on the amendment offered by the gentleman from Massachusetts will be postponed.

AMENDMENT NO. 12 OFFERED BY MR. GEORGE MILLER OF CALIFORNIA

The Acting CHAIR. It is now in order to consider amendment No. 12 printed in part B of House Report 111–479.

Mr. GEORGE MILLER of California. I have an amendment at the desk.

The Acting CHAIR. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 12 offered by Mr. GEORGE MILLER of California:

Page 246, after line 8, add the following new section:

SEC. 704. INFORMATION REQUESTS BY LABOR ORGANIZATIONS.

(a) ELIGIBILITY FOR FUNDS.—Notwithstanding any other provision of this Act, a public institution of higher education that employs employees who are represented by a labor organization and perform work on an activity or program supported by this Act or an amendment made by this Act shall be eligible to receive funding for facilities and administrative costs for any activity or program supported by this Act or the amendments made by this Act only if the institution maintains a policy that meets the requirements set forth in subsection (b).

(b) REQUIREMENTS.—A policy described under subsection (a) shall require that the institution provide, within 15 days of receipt of a request by a labor organization representing the employees of the institution described in subsection (a), any information which the labor organization has a lawful right to obtain under applicable labor laws. Such a policy shall provide that, on a case-by-case basis, such 15 days may be extended to a longer time period by mutual agreement of the labor organization and the institution.

(c) FAILURE TO COMPLY WITH POLICY.—

(1) COMPLAINT OF NONCOMPLIANCE.—In the case of an institution of higher education that does not provide information requested by a labor organization in compliance with the requirements of a policy described in subsections (a) and (b), the labor organization may file a complaint of noncompliance with the head of the agency overseeing any activity or program supported by this Act or the amendments made by this Act for which the institution is receiving funds.

(2) NOTIFICATION TO INSTITUTION.—Upon receiving such a complaint, the head of such agency shall notify the institution of the complaint and provide the institution an additional 30 days to provide the requested information to the labor organization or otherwise explain why the complaint of non-compliance is not valid.

(3) AGENCY ACTION.—If the information has not been provided by the institution at the conclusion of such 30 day period and the head of such agency determines the complaint to be valid, the head of such agency shall suspend payment of any funds for facilities and administrative costs that would otherwise be available to such institution for all activities and programs supported by this Act and the amendments made by this Act until such time as the requested information has been provided by the institution.

(d) DEFINITIONS.—For purposes of this section—

(1) the term ''institution of higher education'' has the meaning given such term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)), except that such term does not include a private institution of higher education; and

(2) the term ''facilities and administrative costs'' means facilities and administrative (F&A) costs as defined in the Office of Management and Budget Revised Circular A–21 (Cost Principles for Educational Institutions, published in the Federal Register on May 10, 2004).

(e) EFFECTIVE DATE.—This section shall take effect on January 1, 2011.

The Acting CHAIR. Pursuant to House Resolution 1344, the gentleman from California (Mr. GEORGE MILLER) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from California.

Mr. GEORGE MILLER of California. I yield myself 3 minutes.

Mr. Chairman, in much of the history of the United States, and certainly in the most recent history of the United States, we have made a decision to build much of our economy on the backs of the best and the brightest that this country has to offer; to go to the research universities and to other universities and develop grants from Federal agencies to the National Science Foundation, from NIH and from the other agencies to do the research necessary to drive basic discovery, and to drive from that discovery innovation, and from that innovation economic growth. And its served this economy and it's served this Nation very, very well over the last 50 years.

But we have a problem here. We have a situation where the best and the brightest people, among the most talented, a select group of people, the postdoctoral individuals, people who've had their master's degrees and their Ph.D.'s in sciences and engineering and mathematics and a whole range of fields participate in that research. They, in many instances, write the grants for that research. The grants are awarded to the universities based upon their work. Those grants provide for escalators so that the principal investigator and the postdocs that he hires, those very bright graduates of our university system to run the labs, to do the research, to assist that individual, that they be provided for.

And yet we find out that in many instances, universities are withholding information that these students have an absolute right under State law to have. And that right is to understand how they are paid and the availability of money in these grants for their increases.

In most of these grants, the Federal institutions and others require that escalators be built into. The universities require when the postdocs and the principal investigators write these grants to submit to the Federal Government and to the agencies that they include an escalator.

And what are the universities doing? In the case of University of California, Berkeley, they withhold. They then take 53 percent in overhead charges. So in a $1 million grant, they get an additional over $500,000 to administer that grant. They take that share of the escalators for themselves, but they don't pass it on to these brilliant young people who are also now—because they've postponed, in many instances, having a family and buying a home, they now become among the lowest-paid people in the region.

All this amendment says is, if they are entitled to the information under the law, that the university should have to provide it. The University of California has been telling these postdocs and telling the Congress of the United States for over a year that they would provide this information, and they have failed to do that.

So what we're saying is that these students are entitled to the law, to that information. It creates no new right. It creates nothing new in collective bargaining. This is not the purpose. The purpose is to—the information that they are entitled to under the law they have.

This is really about the very contracts that the university is administering. And yet a year later after the request by both Members of Congress and the postdoc graduates, they're told that the information is not available. If the information isn't available, it raises questions about the overhead, the $850 million that the University of California took for the purposes of administering these grants.

I reserve the balance of my time.

□ 1645

Mr. HALL of Texas. Mr. Chairman, I rise to claim time in opposition to the amendment.

The Acting CHAIR. The gentleman is recognized for 5 minutes.

Mr. HALL of Texas. Under the Miller amendment, any public university receiving funds in this bill would be required to maintain an ''information policy,'' wherein they would have to produce any documents or information that a union requests within 15 days or face the threat of losing Federal funding.

Additionally, it would place a bureaucrat at a grant-awarding agency, say the National Science Foundation, in charge of determining whether a union was entitled under State or local labor law to the information it requested, and whether the university should lose Federal dollars because it has not given to the union every bit of information which it asked for.

Should NSF be determining whether a university is fulfilling its obligation under State and local labor law? I ask that question.

Also, although the amendment applies to all schools receiving grants under this bill, the bottom line, Mr. Chairman, is that this is a political issue specific to one university, the University of California. It is my understanding that the University of California has been negotiating a contract with the United Auto Workers for some time. These negotiations are completely a function of California State law and have nothing to do with the Federal Government. Rather than attempting to exercise any right or remedy under State law, the UAW has chosen to involve my friends on the other side in threatening the university with Federal dollars to buckle to the union's demands.

This is all I have to say about this. I find this amendment troubling, and urge its defeat.

I reserve the balance of my time.

Mr. GEORGE MILLER of California. Mr. Chairman, this has really nothing to do with labor law. The question is whether the postdoctorate employees of the university who are involved in running these very sophisticated labs and experiments and research, whether or not they get the information that they are entitled to under the law. It only applies in those areas where there is an agreement. Many universities don't have this, some do.

But the point of the matter is that if these young people are not able to provide for themselves, we are going to take talented people and they are going to leave the scientific field. They were given these grants because they are among the best grants in the country. They were peer-reviewed. A decision was made that this is the science that is worth pursuing in the interest of this country in a whole range of fields, whether it is in space or energy or food, whatever it is. That is the point. Yet these people are among the lowest-paid people in the country, with the most education, with the most talent.

All we are saying is give them the information so they can see if there is any restrictions on passing through a

portion of, or whatever they can agree to, of the escalators that are built into these agreements. The university is taking its cut off the top without asking anybody, but somehow the postdocs aren't even entitled to that information or the graduate students aren't entitled to that information under the current policy.

It is simply not fair, and it is going to be very discouraging to extremely talented people that we have placed a bet on. This legislation places a bet on the intellectual talent and the curiosity and the skills of these individuals to drive the next generation of innovation, to drive the next generation of economic growth, to drive the next generation of discovery. That is what this is about. That is what it should be about. But we can't do that by mistreating the very talent pool that is so critical to our success.

This is just a simple request for information. It does not provide any additional rights to anyone that don't exist today. And I think it is time that we recognize the needs of these individuals, of their families, if we are going to retain them in the scientific endeavor of which they have spent most of their life pursuing, and they are obviously very accomplished at this and they are a vital, vital asset to this Nation.

I urge my colleagues to support this amendment, and I want to thank the chairman of the committee for his support of this legislation.

The Acting CHAIR. The gentleman's time has expired.

Mr. HALL of Texas. I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentleman from California (Mr. GEORGE MILLER).

The question was taken; and the Acting Chair announced that the ayes appeared to have it.

Mr. HALL of Texas. Mr. Chairman, I demand a recorded vote.

The Acting CHAIR. Pursuant to clause 6 of rule XVIII, further proceedings on the amendment offered by the gentleman from California will be postponed.

AMENDMENT NO. 13 OFFERED BY MR. REYES

The Acting CHAIR. It is now in order to consider amendment No. 13 printed in part B of House Report 111–479.

Mr. REYES. Mr. Chairman, I have an amendment at the desk.

The Acting CHAIR. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 13 offered by Mr. REYES:

Page 128, line 21, strike ''; and'' and insert a semicolon.

Page 128, after line 25, insert the following new subparagraph:

(E) describe the approaches that will be taken by each participating agency to conduct outreach designed to promote widespread public understanding of career opportunities in the STEM fields specific to the workforce needs of each agency, including outreach to women, Latinos, African-Americans, Native Americans, and other students from groups underrepresented in STEM;

Page 129, line 6, strike the period and insert ''; and''.

Page 129, after line 6, insert the following new paragraph:

(4) establish and maintain a publically accessible online database of all federally sponsored STEM education programs and activities at all levels and for all audiences, including students, teachers, and the general public.

The Acting CHAIR. Pursuant to House Resolution 1344, the gentleman from Texas (Mr. REYES) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Texas.

Mr. REYES. Mr. Chairman, I rise today to urge my colleagues to support the America COMPETES Reauthorization Act of 2010 and, with it, the Reyes-Connolly amendment.

In fact, I want to thank my colleague, the gentleman from Virginia (Mr. CONNOLLY) for cosponsoring this amendment with me. I also want to thank Chairman GORDON and Ranking Member HALL and their staffs on the Science and Technology Committee for their hard work on the America COMPETES legislation. This legislation is vital to our Nation's long-term competitiveness.

This noncontroversial amendment for this legislation would accomplish two goals:

First, it would require the Science, Technology, Engineering and Math Coordinating Committee under the Office of Science and Technology policy to describe in their 5-year strategic plan the approaches that each STEM agency will take to conduct outreach designed to promote widespread public understanding of career opportunities in STEM fields.

Second, the amendment requires the establishment and the maintenance of a publicly accessible online database, or a STEM.gov, if you will, of all federally-sponsored STEM education programs. STEM.gov would be a one-stop shop where teachers, students, and researchers would be able to access information on all of the opportunities available in STEM fields. Currently, all STEM programs are listed in different places online with different programs, and this amendment would simply consolidate the information for easier access in one location.

Mr. Chairman, it is important that we increase awareness of all the available opportunities in STEM fields, and that is exactly what this amendment does. To that end, I would urge all my colleagues to vote ''yes'' for the Reyes-Connolly amendment, and also ''yes'' on the final passage of this legislation.

Your vote will go a long way in showing Americans that Congress is serious about making America more competitive now and in the future.

Mr. Chairman, I reserve the balance of my time.

Mr. HALL of Texas. Mr. Chairman, I rise to claim time in opposition to the amendment, although I do not intend to oppose it.

The Acting CHAIR. Without objection, the gentleman is recognized for 5 minutes.

There was no objection.

Mr. HALL of Texas. I have no opposition or objection to this amendment.

I reserve the balance of my time.

Mr. REYES. Mr. Chairman, I yield such time as he may consume to Mr. CONNOLLY of Virginia, the cosponsor of this amendment.

Mr. CONNOLLY of Virginia. I thank my friend from Texas.

Mr. Chair, let me start by thanking my colleagues for their leadership on this important legislation, both the chairman and the ranking member.

As the co-chair of the Diversity and Innovation Caucus, my colleague from Texas has been a true champion for STEM education, particularly in our underrepresented communities. Chairman GORDON and the members of the Science and Technology Committee have certainly shown leadership on this issue as well.

Our amendment builds upon that work by requiring the new STEM coordinating committee created in this legislation to work with each agency under its jurisdiction to promote more public awareness of career opportunities in the STEM fields, particularly within the Federal workforce. We have a hard time filling positions in the science, technology, and engineering and math fields, and I believe part of the trouble is that, one, people don't know that they are out there and, two, they don't realize that careers like this are available in public service. So clearly we can do better.

Our amendment also calls for new outreach strategies to women, Latinos, African Americans, Native Americans, and other students from underrepresented communities in the Federal workforce. Even in minority majority school systems like Prince William County, and Fairfax County in my district, we are working especially hard to make sure enrollment in STEM programs reflects the diversity of our student body.

Another key component of our amendment would require the STEM coordinating committee to create and maintain an online, searchable database of all federally funded STEM education programs that benefit students, teachers, and the general public.

We are providing tremendous opportunity in the STEM fields, but more people need to know about them and be excited about them for it to be successful.

Mr. Chairman, my experience in local government showed me that investments in education of our children attract families and jobs. The school and business communities in my district have made significant investments in our local STEM programs, whether it is Thomas Jefferson High School in Fairfax, whose tie I am wearing today, or the new Governor's School at Innovation Park in Prince William County.

Those efforts are just one reason why at least nine Fortune 500 companies

have brought their headquarters to Northern Virginia and why the Commonwealth of Virginia has the highest concentration of technology-related jobs in the United States, half of them in northern Virginia.

This bill will further support those local efforts and better position our region and our Nation to be a leader in the global economy.

I join my colleague from Texas in urging our colleagues to support this important amendment.

Mr. REYES. Mr. Chairman, I yield back the balance of my time.

Mr. HALL of Texas. Mr. Chairman, I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentleman from Texas (Mr. REYES).

The question was taken; and the Acting Chair announced that the ayes appeared to have it.

Mr. REYES. Mr. Chair, I demand a recorded vote.

The Acting CHAIR. Pursuant to clause 6 of rule XVIII, further proceedings on the amendment offered by the gentleman from Texas will be postponed.

AMENDMENTS EN BLOC NO. 2 OFFERED BY MR. GORDON OF TENNESSEE

Mr. GORDON of Tennessee. Mr. Chairman, I have amendments en bloc at the desk.

The Acting CHAIR. The Clerk will designate the amendments en bloc.

Amendments en bloc No. 2 offered by Mr. GORDON of Tennessee consisting of amendments numbered 14, 15, 16, 17, 22, 35, 42, 43, 49, 23, 24, 46, 48, and 9 printed in part B of House Report 111–479:

AMENDMENT NO. 14 OFFERED BY MS. LORETTA SANCHEZ OF CALIFORNIA

The text of the amendment is as follows:

Page 131, line 6, redesignate paragraph (1) as paragraph (2).

Page 131, line 7, redesignate paragraph (2) as paragraph (3).

Page 131, line 9, redesignate paragraph (3) as paragraph (4).

Page 131, line 10, redesignate paragraph (4) as paragraph (5).

Page 131, line 12, redesignate paragraph (5) as paragraph (6).

Page 131, line 13, redesignate paragraph (6) as paragraph (7).

Page 131, after line 5, insert the following:

(1) Elementary school and secondary school administrator associations.

AMENDMENT NO. 15 OFFERED BY MR. BISHOP OF NEW YORK

The text of the amendment is as follows:

Page 174, after line 13, insert the following:

SEC. 412. NANOMATERIAL INITIATIVE.

The Director shall carry out a nanomaterial research initiative to—

(1) develop reference materials for nanomaterials and derived products to be used in benchmarking toxicity, calibrating instruments, and facilitating laboratory comparisons;

(2) assist in the development of international documentary standards relating to nanomaterials;

(3) develop instruments and measurement methods to determine the physical and chemical properties of nanomaterials; and

(4) gather and develop data to support the correlation of physical and chemical properties of nanomaterials to any environmental, safety, or other risks.

AMENDMENT NO. 16 OFFERED BY MR. BARROW OF GEORGIA

The text of the amendment is as follows:

Page 58, line 16, strike ''and''.

Page 58, line 22, strike the period and insert ''; and''.

Page 58, after line 22, insert the following new subparagraph:

(D) describe how the Federal agencies supporting manufacturing research and development will strengthen all levels of manufacturing education and training programs to ensure an adequate, well-trained workforce.

AMENDMENT NO. 17 OFFERED BY MR. CARNEY OF PENNSYLVANIA

The text of the amendment is as follows:

Page 125, after line 23, insert the following new subsection (and redesignate the subsequent subsections accordingly):

(c) OUTREACH TO RURAL COMMUNITIES.—The Foundation shall conduct outreach to institutions of higher education and private sector entities in rural areas to encourage those entities to participate in partnerships under this section.

AMENDMENT NO. 22 OFFERED BY MS. HERSETH SANDLIN OF SOUTH DAKOTA

The text of the amendment is as follows:

Page 98, after line 4, insert the following new section:

SEC. 229. COLLABORATION IN PLANNING FOR STEWARDSHIP OF LARGE-SCALE FACILITIES.

It is the sense of Congress that the Foundation should, in its planning for construction and stewardship of large facilities, coordinate and collaborate with other Federal agencies, including the Department of Energy's Office of Science, to ensure that joint investments may be made when practicable. In particular, the Foundation should ensure that it responds to recommendations by the National Academy of Sciences and working groups convened by the National Science and Technology Council regarding such facilities and opportunities for partnership with other agencies in the design and construction of such facilities. For facilities in which research in multiple disciplines will be possible, the Director should include multiple units within the Foundation during the planning process.

AMENDMENT NO. 35 OFFERED BY MR. CHILDERS OF MISSISSIPPI

The text of the amendment is as follows:

Page 174, after line 13, insert the following:

SEC. 412. DISASTER RESILIENT BUILDINGS AND INFRASTRUCTURE.

(a) ESTABLISHMENT.—The Director shall carry out a disaster resilient buildings and infrastructure program.

(b) REAL-SCALE STRUCTURES.—As part of the program, the Director shall—

(1) develop the capability to test real-scale structures under realistic fire and structural loading conditions; and

(2) assist in the validation of predictive models by developing a database on the performance of large-scale structures under realistic fire and structural loading conditions.

(c) DATABASE.—As part of the program, the Director shall develop a database on the performance of the built environment during natural and man-made hazard events.

AMENDMENT NO. 42 OFFERED BY MR. KISSELL OF NORTH CAROLINA

The text of the amendment is as follows:

Page 182, after line 18, insert the following:

''(3) LIMITATION.—In charging and collecting fees under paragraph (1), the Secretary shall take into consideration the amount of the obligation.

Page 183, after line 22, insert the following (and redesignate subsequent paragraphs accordingly):

''(2) criteria that the Secretary shall use to determine the amount of any fees charged under subsection (j), including criteria related to the amount of the obligation;

AMENDMENT NO. 43 OFFERED BY MR. KLEIN OF FLORIDA

The text of the amendment is as follows:

Page 166, after line 9, insert the following new subsection:

(g) EVALUATION OF OBSTACLES UNIQUE TO SMALL MANUFACTURERS.—Section 25 of such Act (15 U.S.C. 278k) is further amended by adding after subsection (i), as added by subsection (f), the following:

''(j) EVALUATION OF OBSTACLES UNIQUE TO SMALL MANUFACTURERS.—The Director shall—

''(1) evaluate obstacles that are unique to small manufacturers that prevent such manufacturers from effectively competing in the global market;

''(2) implement a comprehensive plan to train the Centers to address such obstacles; and

''(3) facilitate improved communication between the Centers to assist such manufacturers in implementing appropriate, targeted solutions to such obstacles.''.

AMENDMENT NO. 49 OFFERED BY MR. PERRIELLO OF VIRGINIA

The text of the amendment is as follows:

Page 132, line 3, insert '', including through the interagency committee established under section 301,'' after ''Federal agencies''.

AMENDMENT NO. 23 OFFERED BY MR. HOLT OF NEW JERSEY

The text of the amendment is as follows:

At the end of subtitle C of title I, insert the following:

SEC. 125. NATIONAL COMPETITIVENESS AND INNOVATION STRATEGY.

Not later than one year after the date of the enactment of this Act, the Director of the White House Office of Science and Technology Policy shall submit to Congress and the President a national competitiveness and innovation strategy for strengthening the innovative and competitive capacity of the Federal Government, State and local governments, institutions of higher education, and the private sector that includes—

(1) proposed legislative changes and action;

(2) proposed actions to be taken collectively by executive agencies, including White House offices;

(3) proposed actions to be taken by individual executive agencies, including White House offices; and

(4) a proposal for metrics-based monitoring and oversight of the progress of the Federal Government with respect to improving conditions for the innovation occuring in and the competitiveness of the United States.

AMENDMENT NO. 24 OFFERED BY MR. HOLT OF NEW JERSEY

The text of the amendment is as follows:

Page 62, after line 2, insert the following new subsection:

(f) SENSE OF CONGRESS REGARDING PEER REVIEW.—It is the sense of Congress that peer review is an important part of the process of ensuring the integrity of the record of scientific research, and that the National Science and Technology Council working group established under this section should take into account the role that scientific publishers play in the peer review process.

AMENDMENT NO. 46 OFFERED BY MR. MINNICK OF IDAHO

The text of the amendment is as follows:

Page 132, line 7, strike ''and''.

Page 132, line 12, strike the period and insert ''; and''.

Page 132, after line 12, insert the following new paragraph:

(5) providing advice to Federal agencies on how their STEM technical training and education programs can be better aligned with the workforce needs of States and regions.

AMENDMENT NO. 48 OFFERED BY MR. PATRICK J. MURPHY OF PENNSYLVANIA

The text of the amendment is as follows:

Page 138, line 5, strike ''and''.

Page 138, line 9, strike the period at the end and insert ''; and''.

Page 138, after line 9, insert the following:

(6) competitive grants for institutions of higher education (as defined under section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a))), including 2-year institutions of higher education, to establish or expand degree programs or courses in energy systems science and engineering.

AMENDMENT NO. 9 OFFERED BY MR. KANJORSKI OF PENNSYLVANIA

The text of the amendment is as follows:

Page 188, after line 25, insert the following:

''(H) Interacting with the public and State and local governments to meet the goals of the cluster.

The Acting CHAIR. Pursuant to House Resolution 1344, the gentleman from Tennessee (Mr. GORDON) and the gentleman from Texas (Mr. HALL) each will control 20 minutes.

The Chair recognizes the gentleman from Tennessee.

Mr. GORDON of Tennessee. Mr. Chairman, this is a well-vetted and good amendment.

I yield 2 minutes to the gentlelady from California (Ms. LORETTA SANCHEZ).

Ms. LORETTA SANCHEZ of California. Mr. Chairman, I thank the chairman for the time allotted. And what a wonderful bill, and I believe it is just going to really bring our whole Nation up.

Today, we face so many mounting global challenges—international security, reviving the global economy, health, environment, wars going on—and American leadership in response to these challenges depends on national policies such as the legislation that we are debating today.

The America COMPETES Act strengthens STEM education in order to prepare our future workforce to excel and to exceed in an international economy. Future generations' ability to address 21st century global matters efficiently and effectively will depend on their preparation and their responsiveness to international affairs.

Today, our schools lack some of the tools necessary to enhance United States' competitiveness, essential to our economy and, really, to our international success. And so I firmly believe that our Nation's leadership role in innovation depends on the education we provide in today's classrooms. In fact, one of my top legislative priorities is H.R. 3359, the U.S. and World Education Act, that has many of the types of things that this bill has.

To this end, the amendment that I am offering today would include the membership of elementary school and secondary school administrative associations to be part of the President's Advisory Committee on STEM Education. My amendment would add language to include the expertise of kindergarten through 12th grade school principals and administrators to the President's advisory committee created under section 302. The amendment will strengthen section 302 by ensuring the valuable contributions of those who are in our kindergarten through 12th grade system, those administering that, so they can bring back their ideas and tell us what is going on, because evidence suggests that kids lose interest in STEM in those grade levels. So I urge my colleagues to support this amendment.

□ 1700

Mr. HALL of Texas. Mr. Chair, I rise in opposition to the en bloc amendments before us, although I do not intend to oppose them. All 14 of the amendments are noncontroversial and are generally supported.

I do have some concern with the Carney amendment. I think while I'm supportive of trying to get students in rural areas more engaged in STEM activities, I just don't believe it's the role of NSF to perform outreach for an industry intern program, period. This amendment is part of a new and duplicative STEM Industry Internship program intended to marry local industry workforce educational needs with local college programing. There's a match associated with this grant, and I think almost any outreach to prospective students or interns should be performed by the participating industry and school with non-Federal money, not with taxpayer money. Therefore, while I will be opposing the Carney amendment, I do not plan to oppose the others in this group.

I reserve the balance of my time.

Mr. GORDON of Tennessee. Mr. Chairman, I yield 3 minutes to a former administrator at Long Island College, the gentleman from New York (Mr. BISHOP).

Mr. BISHOP of New York. I thank the chairman for yielding.

My amendment directs the National Institute of Standards and Technology to develop reference materials, standards, instruments, and measurement methods for nanomaterials and derived products. My amendment also calls on the NIST to compile data to help us understand how the properties of nanomaterials correlate with environmental, health, and safety risks. We stand on the precipice of a new wave of scientific and technological advancement through the development of nanotechnology or controlling matter on an atomic and molecular scale. Advancements in this field have the potential to create new materials and devices with a vast range of applications, such as medicine, electronics, and energy production. I am proud to represent Brookhaven National Laboratory, where many of these breakthroughs have been discovered. However, nanotechnology raises many of the same issues as with any introduction of new technology, including concerns about the toxicity and environmental impact of nanomaterials. My amendment would ensure that we closely monitor how this new technology affects our health and safety.

Mr. Chairman, while we must do all we can to incentivize and nurture innovation and competitiveness, we must also balance and make consistent the commercialization of new technologies with our duty to protect and inform the public. My amendment, therefore, helps establish a commonsense roadmap for the development of nanotechnology standards. I urge my colleagues to support my amendment and the underlying bill.

Let me also close by taking this opportunity to commend Chairman GORDON for his leadership on this issue and for a very distinguished career in Congress—a career that has reflected a firm commitment to American competitiveness.

Mr. HALL of Texas. Mr. Chairman, I reserve the balance of my time.

Mr. GORDON of Tennessee. Mr. Chairman, I yield 2 minutes to the gentleman from Georgia (Mr. BARROW).

Mr. BARROW. Mr. Chairman, I've spent a lot of time visiting businesses in my district, many of which are large manufacturers. I've been struck that even as our economy becomes more sophisticated, we still rely a great deal on our manufacturing base. That base is threatened by competition from abroad and by financial crisis at home. What has sustained us through the hard times lately has always been American innovation. The America COMPETES Act fosters that tradition and I'm proud to support it.

I'm pleased to offer an amendment that I think makes this good bill a little bit better. In the 12th District of Georgia, we make everything from lawnmower blades to jet airplanes. But the fundamentals of both industries are very similar. It all starts with education in science, math, and engineering. My amendment simply requires that we include manufacturing education in our long-term strategic plan for manufacturing research and development. I think that makes good common sense, and good business sense,

and I thank the chairman for his support.

Mr. HALL of Texas. Mr. Chairman, I reserve the balance of my time.

Mr. GORDON of Tennessee. Mr. Chairman, I yield 2 minutes to the gentleman from Pennsylvania (Mr. ALTMIRE).

Mr. ALTMIRE. Mr. Chairman, I rise in support of the America COMPETES Reauthorization Act of 2010, and I'm a proud cosponsor of this legislation to strengthen our Nation's global competitiveness. Foremost, this bill will create jobs. For example, it will give small- and medium-sized manufacturing companies pursuing cutting-edge technology access to capital. It will prepare the next generation of Americans for the jobs of tomorrow by improving science, technology, engineering, and math education. It will also keep our Nation on a path to doubling funding for scientific research in the next decade. I'm pleased to note that this bill also includes provisions to help women enter science, technology, engineering, and mathematics fields.

Mr. Chairman, I have offered an amendment to this legislation with my good friend from Pennsylvania, Congressman PATRICK MURPHY, that is in the en bloc amendment before us. Our amendment would authorize competitive grants at the Department of Energy for colleges to provide degrees in energy-related fields. Colleges and universities would be able to use the funding for degrees and courses in engineering and energy systems science. Schools could also put the funding toward expanding current programs. And I'd like to point out that community colleges, of which my district has three, would also be eligible to compete for these grants.

Finally, authorizing these grants will not cost the taxpayers one penny. Our amendment simply allows the Department of Energy to redirect some of its existing education funding towards this valuable new program.

I urge support for the Murphy-Altmire provision and for the overall COMPETES Reauthorization Act.

Mr. HALL of Texas. Mr. Chairman, I reserve the balance of my time.

Mr. GORDON of Tennessee. Mr. Chairman, I yield 3 minutes to the gentleman from New Jersey (Mr. HOLT).

Mr. HOLT. Mr. Chair, I strongly support the robust investment in education, research, innovation, manufacturing, and other programs in the COMPETES Act. The amendment I'm offering would help stitch together these important initiatives by directing the White House Office of Science and Technology Policy to prepare a comprehensive national competitiveness and innovation strategy within 1 year.

We know that half or perhaps more of the growth in our GDP over the past half century is attributable to our investments in research and technology. For decades, United States leadership in science, engineering, and innovation was unquestionable. But we can't pretend any more that this is a given. A year ago, the Information Technology and Innovation Foundation, using good methodology, found that among 40 major nations or regions, the United States ranks not first, but sixth, in overall innovation and competitiveness. More importantly, over the last decade, every one of those 40 has improved their innovation capacity at a greater rate than we.

The five nations ranked by ITIF as ''out-competing'' the United States already have national competitiveness or innovation strategies in place. Altogether, at least 30 countries with whom we might compare ourselves have implemented plans to boost their competitiveness. The United States has yet to put forward a similarly comprehensive roadmap for success. Of course, it's not a panacea. But we have the tools and resources to lead the world in science and technology. We can't remain complacent as other nations race to the top. We need to know what is working and what needs improvement. We need to understand how we can reallocate our resources to improve efficiency and productivity. We need to be able to measure whether our actions are having a positive effect. Businesses, schools, and governments need to know where we stand and need to be clear on where we're going.

My amendment requires a comprehensive, coordinated national strategy for improving our economic competitiveness through innovation, and it ensures that we will continuously evaluate our progress in this area. Our competitors are doing it already. We should, too.

I urge my colleagues to support this amendment and the underlying bill. This bill is a real testament to the good work of the fine chair of the Science Committee, Mr. GORDON. I thank him for the good work.

Mr. HALL of Texas. Mr. Chairman, I yield back the balance of my time.

Mr. GORDON of Tennessee. Mr. Chairman, we have no further speakers, so let me just conclude by saying that this is a good series of amendments. This makes a good bill even better.

I yield back the balance of my time.

The Acting CHAIR (Mr. DRIEHAUS). The question is on the amendments en bloc offered by the gentleman from Tennessee (Mr. GORDON).

The amendments en bloc were agreed to.

AMENDMENT NO. 21 OFFERED BY MR. GINGREY OF GEORGIA

The Acting CHAIR. It is now in order to consider amendment No. 21 printed in part B of House Report 111–479.

Mr. GINGREY. Mr. Chairman, I have an amendment at the desk made in order by the rule.

The Acting CHAIR. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 21 offered by Mr. GINGREY of Georgia:

Page 98, after line 4, insert the following new section:

SEC. 229. GREEN CHEMISTRY BASIC RESEARCH.

The Director shall establish a Green Chemistry Basic Research program to award competitive, merit-based grants to support research into green and sustainable chemistry which will lead to clean, safe, and economical alternatives to traditional chemical products and practices. The research program shall provide sustained support for green chemistry research, education, and technology transfer through—

(1) merit-reviewed competitive grants to individual investigators and teams of investigators, including, to the extent practicable, young investigators, for research;

(2) grants to fund collaborative research partnerships among universities, industry, and nonprofit organizations;

(3) symposia, forums, and conferences to increase outreach, collaboration, and dissemination of green chemistry advances and practices; and

(4) education, training, and retraining of undergraduate and graduate students and professional chemists and chemical engineers, including through partnerships with industry, in green chemistry science and engineering.

The Acting CHAIR. Pursuant to House Resolution 1344, the gentleman from Georgia (Mr. GINGREY) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Georgia.

Mr. GINGREY of Georgia. Mr. Chairman, I yield myself 3 minutes.

Mr. Chairman, the amendment that I am offering today stems from legislation, the Green Chemistry Research and Development Act, that has passed out of the House in each of the 108th, 109th, and 110th Congresses. Unfortunately, despite the strong bipartisan support that this legislation has garnered under suspension of the rules, this legislation has been stalled by our colleagues in the Senate. Therefore, in order to move this initiative forward, I am offering it as an amendment with my colleague from Vermont (Mr. WELCH) to the National Science Foundation title of H.R. 5116. This amendment would establish a Green Chemistry Basic Research program to encourage universities and academic institutions around the country to train future workers in green chemistry technology.

Mr. Chairman, as a graduate of Georgia Tech with a bachelor of science in chemistry, I know that chemists can design chemicals to be safe, just as they can design them to have other properties, like color and texture. As chemists design products and the processes by which these products are manufactured, they can and they should factor in the possible creation of any hazardous byproducts.

This technique of considering not only the process in which chemicals are produced but also the environment in which they are created is the basic definition of what we call green chemistry. It is the method of designing chemical products and processes that

at the very least reduce, and at the very best, eliminate the use or generation of hazardous substances.

Mr. Chairman, the basic idea is this. Preventing pollution and hazardous waste from the start of a design process is far preferable to cleaning up that pollution and waste at a later date. Green chemistry does not just help protect our environment, it also helps protect our workers. The conditions under which chemicals are created and used can present many risks to those who work on their production. I would urge all my colleagues to support this amendment.

I reserve the balance of my time.

Mr. GORDON of Tennessee. I claim time in opposition to the amendment, even though I am not in opposition to the amendment.

The Acting CHAIR. Without objection, the gentleman is recognized for 5 minutes.

There was no objection.

Mr. GORDON of Tennessee. Mr. Chairman, I rise in support of the amendment from my friend, the gentleman from Georgia (Mr. GINGREY).

This amendment establishes a Green Chemistry Research program at the National Science Foundation. Dr. GINGREY has been an advocate for this both on the committee as well as now. I commend him for that. The emerging field of green chemistry will contribute significantly to our environmental sustainability while also driving innovation in the chemical industry sector. Green chemistry research will be instrumental in meeting the challenges of protecting human health and the environment, meeting our energy needs, enhancing the national security, and strengthening the economy. I urge my colleagues to support this amendment.

I yield back the balance of my time.

□ 1715

Mr. GINGREY of Georgia. Mr. Chairman, may I ask how much time I have remaining.

The Acting CHAIR. The gentleman from Georgia has 3 minutes remaining.

Mr. GINGREY of Georgia. Mr. Chairman, I would now like to yield 2 minutes to the gentleman from Texas (Mr. HALL), the ranking member.

Mr. HALL of Texas. Mr. Chairman, I rise in support of Dr. GINGREY's amendment. This amendment would establish a green chemistry basic research and development program at the National Science Foundation, aimed at identifying scientific breakthroughs that could lead to clean, safe, and economical alternatives to chemical products. The Science and Technology Committee has supported funding for green chemistry research in a bipartisan manner for many years, and Dr. GINGREY has been the leader on this from day one. His amendment simply builds on those efforts. I thank him for offering this amendment and urge my colleagues to support it.

Mr. GINGREY of Georgia. Mr. Chairman, I yield myself the balance of my time.

Mr. Chairman, ultimately, I believe this amendment will help promote education through collaborative research partnerships among universities, and it will provide training tools for undergraduate and graduate students in green chemistry technology. I want to thank my colleague from the Energy and Commerce Committee, Mr. WELCH, for his support and leadership on the issue, and I would also like to thank the American Chemical Society for its endorsement of this amendment.

Last, but certainly not least, I would like to commend both Science Committee Chairman BART GORDON and Ranking Member HALL on their leadership on green chemistry and their willingness to work with us on this particular amendment. An ounce of prevention is worth a pound of cure, and green chemistry promises a ton of pollution prevention. Again, Mr. Chairman, I urge all my colleagues to support this important amendment.

I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentleman from Georgia (Mr. GINGREY).

The amendment was agreed to.

AMENDMENT NO. 34 OFFERED BY MR. BOCCIERI

The Acting CHAIR. It is now in order to consider amendment No. 34 printed in part B of House Report 111–479.

Mr. BOCCIERI. Mr. Chair, I have an amendment at the desk.

The Acting CHAIR. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 34 offered by Mr. BOCCIERI:
Page 187, line 8, strike ''$50,000,000'' and insert ''$100,000,000''.

The Acting CHAIR. Pursuant to House Resolution 1344, the gentleman from Ohio (Mr. BOCCIERI) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Ohio.

Mr. BOCCIERI. Mr. Chair, I yield myself as much time as I may consume.

Mr. Chair, if you believe like I do that we need to be the producers of wealth, not just the movers of wealth, then you're going to like this amendment. If you believe, like I do, that we need to invest in the innovative spirit of America, then you're going to like this amendment. If you believe, like I do, that we need to be investing in our national defense and manufacturing in Ohio and across the Midwest, then you're going to like the amendment we have to offer.

I rise today in support of the Boccieri-Schauer-Davis-Donnelly amendment which will expand the Federal loan guarantees for innovative technologies in manufacturing from $50 million to $100 million. This amendment is an investment in our Nation's manufacturing base, the backbone of our economic recovery that will give additional funding for loans to embrace advances in technology, innovation and retool and rebuild so that we can compete on a global scale.

Ninety-six percent of Ohio's exports come from the manufacturing of more than $84 billion worth of goods, yet manufacturers in my northeastern Ohio district have been hit disproportionately hard by this economic recession, and we need to do more to expand. Companies like Sandridge Food Corporation in Medina, Barbasol Shaving Cream plant in Ashland, and the new jobs at NuEarth Corporation in Alliance all need the resources and innovative spirit to move our economy down the field. We need to grow and create jobs not only in Ohio but across our country. This will be the impetus for leading us out of this recession. This amendment nearly authorizes $100 million to rebuild and retool our economy.

At this time, Mr. Chair, I reserve the balance of my time.

Mr. HALL of Texas. Mr. Chairman, I rise to claim time in opposition to the amendment.

The Acting CHAIR. The gentleman is recognized for 5 minutes.

Mr. HALL of Texas. This amendment would double to $100 million annually the authorization levels of the new never-done-before loan guarantee program created in the bill. I have major concerns with this program as it stands, particularly because it's heavily redundant with existing loan guarantee programs, such as those at the Small Business Administration where small manufacturers can and do apply for support. Doubling the amount and doubling this spending on an unnecessary and redundant program is not good policy. Accordingly, I oppose the amendment.

I reserve the balance of my time.

Mr. BOCCIERI. Mr. Chair, I would inquire how much time I have left.

The Acting CHAIR. The gentleman has 3½ minutes remaining.

Mr. BOCCIERI. Thank you. I would like to yield 1 minute to the gentleman from Indiana (Mr. DONNELLY).

Mr. DONNELLY of Indiana. Mr. Chairman, manufacturing provides almost 20 percent of Indiana's jobs, more than any other sector in the State. When I am back in my district, Hoosier manufacturers tell me they want to retool and reinvest in their facilities so that we can better compete in America, so we can be the best in the world so that we can compete with our overseas competition, so that we can grow and put people back to work.

However, I often hear from our manufacturers that the credit markets, which have been so tight, have made it very, very difficult to get a loan. This amendment helps those manufacturers to achieve that goal. CBO estimates that for every $1 we provide in loan guarantees, we can generate $6 in loans to manufacturers, meaning this amendment enables the Department of Commerce to generate $600 million in much-needed guaranteed loans to manufacturers who are seeking to innovate and put people back to work. That is why I support this.

Mr. HALL of Texas. Mr. Chairman, I reserve the balance of my time.

Mr. BOCCIERI. Mr. Chair, I yield myself 1 minute.

I understand that the gentleman from Texas is rising in opposition to this amendment because he believes that it is unnecessary. But let me tell you what we're doing in Ohio. We have a community college that has worked closely with the local economy, making a bridge between the local innovation and investments and the research and development to create pipelines for jobs. Rolls-Royce Corporation just announced that they're moving their research for their fuel cells from Singapore to Stark County, Ohio. And they have a pipeline there. They're creating a curriculum based on science, technology, engineering, and mathematics. They need the resources, they need the tools to help innovate and move us out of this recession so we can end our dependence on foreign oil. This is a small example of how successful a program like this could be in our great State of Ohio.

Mr. Chair, I yield 30 seconds to the distinguished gentleman from Tennessee (Mr. GORDON), the Chair of the committee.

Mr. GORDON of Tennessee. First, let me compliment Mr. BOCCIERI and his partners for introducing this good amendment. I want to clear up a matter concerning the duplication, title 5, section 502, page 185 under ''coordination and duplication'': ''To the maximum extent practical, the Secretary shall ensure that the activities carried out under this section are coordinated with and do not duplicate the efforts of other loan guarantee programs within the Federal Government.''

This is a good amendment that will label more small- and medium-sized manufacturers to take advantage of loan guarantee programs for innovation, technologies at the Department of Commerce which, in turn, will mean more jobs for Americans.

Mr. HALL of Texas. I reserve the balance of my time.

Mr. BOCCIERI. I would like to inquire how much time we have remaining, Mr. Chair.

The Acting CHAIR. The gentleman has 1¼ minutes remaining.

Mr. BOCCIERI. I yield 1 minute to the gentleman from Michigan (Mr. SCHAUER).

Mr. SCHAUER. Mr. Chair, in Michigan, gaining access to needed capital is hard to come by, and many Michigan businesses continue to be redlined for loans. In my district, there's a need for loan programs to help manufacturers, such as production engineering in Jackson, Michigan, to help them have the opportunity to gain access to capital, to help them move forward to retool their current manufacturing process with the newest technologies, to help make the high-quality components for the military, heavy truck, construction equipment and material handling equipment, industries that they are known for, and to help put them in a better position to be able to capture their share in the global economy.

This amendment is about jobs that we need now. I ask for your support of the Boccieri-Schauer amendment.

Mr. BOCCIERI. Mr. Chair, at this time I yield back the balance of my time.

Mr. HALL of Texas. I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentleman from Ohio (Mr. BOCCIERI).

The question was taken; and the Acting Chair announced that the ayes appeared to have it.

Mr. HALL of Texas. Mr. Chair, I demand a recorded vote.

The Acting CHAIR. Pursuant to clause 6 of rule XVIII, further proceedings on the amendment offered by the gentleman from Ohio will be postponed.

ANNOUNCEMENT BY THE ACTING CHAIR

The Acting CHAIR. Pursuant to clause 6 of rule XVIII, proceedings will now resume on those amendments printed in part B of House Report 111–479 on which further proceedings were postponed, in the following order:

Amendment No. 1 by Mr. GORDON of Tennessee;

Amendment No. 6 by Mr. HALL of Texas;

Amendment No. 10 by Mr. MARKEY of Massachusetts;

Amendment No. 12 by Mr. GEORGE MILLER of California;

Amendment No. 13 by Mr. REYES of Texas.

The Chair will reduce to 5 minutes the time for any electronic vote after the first vote in this series.

AMENDMENT NO. 1 OFFERED BY MR. GORDON OF TENNESSEE

The Acting CHAIR. The unfinished business is the demand for a recorded vote on the amendment offered by the gentleman from Tennessee (Mr. GORDON) on which further proceedings were postponed and on which the ayes prevailed by voice vote.

The Clerk will redesignate the amendment.

The Clerk redesignated the amendment.

RECORDED VOTE

The Acting CHAIR. A recorded vote has been demanded.

A recorded vote was ordered.

The vote was taken by electronic device, and there were—ayes 417, noes 6, not voting 13, as follows:

[Roll No. 262]

AYES—417

Ackerman
Aderholt
Adler (NJ)
Akin
Alexander
Altmire
Andrews
Arcuri
Austria
Baca
Bachmann
Bachus
Baird
Baldwin
Barrow
Bartlett
Barton (TX)
Bean
Becerra
Berkley
Berman
Berry
Biggert
Bilbray
Bilirakis
Bishop (GA)
Bishop (NY)
Bishop (UT)
Blackburn
Blumenauer
Blunt
Boccieri
Boehner
Bonner
Bono Mack
Boozman
Bordallo
Boren
Boswell
Boucher
Boustany
Boyd
Brady (PA)
Brady (TX)
Braley (IA)
Bright
Broun (GA)
Brown (SC)
Brown, Corrine
Brown-Waite, Ginny
Buchanan
Burton (IN)
Butterfield
Buyer
Calvert
Camp
Campbell
Cantor
Cao
Capito
Capps
Capuano
Cardoza
Carnahan
Carson (IN)
Carter
Cassidy
Castle
Castor (FL)
Chaffetz
Chandler
Childers
Christensen
Chu
Clarke
Clay
Cleaver
Clyburn
Coble
Coffman (CO)
Cohen
Conaway
Connolly (VA)
Conyers
Cooper
Costa
Costello
Courtney
Crenshaw
Crowley
Cuellar
Culberson
Cummings
Dahlkemper
Davis (CA)
Davis (IL)
Davis (KY)
Davis (TN)
DeFazio
DeGette
Delahunt
DeLauro
Dent
Deutch
Diaz-Balart, L.
Diaz-Balart, M.
Dicks
Dingell
Doggett
Donnelly (IN)
Doyle
Dreier
Driehaus
Duncan
Edwards (MD)
Edwards (TX)
Ehlers
Ellison
Ellsworth
Emerson
Engel
Eshoo
Etheridge
Faleomavaega
Fallin
Farr
Fattah
Filner
Fleming
Forbes
Fortenberry
Foster
Foxx
Frank (MA)
Franks (AZ)
Frelinghuysen
Fudge
Gallegly
Garamendi
Gerlach
Giffords
Gingrey (GA)
Gohmert
Gonzalez
Goodlatte
Gordon (TN)
Granger
Graves
Grayson
Green, Al
Green, Gene
Griffith
Grijalva
Guthrie
Gutierrez
Hall (NY)
Hall (TX)
Halvorson
Hare
Harman
Harper
Hastings (FL)
Hastings (WA)
Heinrich
Heller
Hensarling
Herger
Herseth Sandlin
Higgins
Hill
Himes
Hinchey
Hinojosa
Hirono
Hodes
Holden
Holt
Honda
Hoyer
Hunter
Inglis
Inslee
Israel
Issa
Jackson (IL)
Jenkins
Johnson (GA)
Johnson (IL)
Johnson, E. B.
Johnson, Sam
Jones
Jordan (OH)
Kagen
Kanjorski
Kaptur
Kennedy
Kildee
Kilpatrick (MI)
Kilroy
Kind
King (IA)
King (NY)
Kingston
Kirk
Kirkpatrick (AZ)
Kissell
Klein (FL)
Kline (MN)
Kosmas
Kratovil
Kucinich
Lamborn
Lance
Langevin
Larsen (WA)
Larson (CT)
Latham
LaTourette
Latta
Lee (CA)
Lee (NY)
Levin
Lewis (CA)
Lewis (GA)
Linder
Lipinski
LoBiondo
Loebsack
Lofgren, Zoe
Lowey
Lucas
Luetkemeyer
Luján
Lungren, Daniel E.
Lynch
Mack
Maffei
Maloney
Manzullo
Marchant
Markey (CO)
Markey (MA)
Marshall
Matheson
Matsui
McCarthy (CA)
McCarthy (NY)
McCaul
McCollum
McCotter
McDermott
McGovern
McHenry
McIntyre
McKeon
McMahon
McMorris Rodgers
McNerney
Meek (FL)
Meeks (NY)
Melancon
Mica
Michaud
Miller (FL)
Miller (MI)
Miller (NC)
Miller, Gary
Miller, George
Minnick
Mitchell
Mollohan
Moore (KS)
Moran (KS)
Moran (VA)
Murphy (CT)
Murphy (NY)
Murphy, Patrick
Murphy, Tim
Myrick
Napolitano
Neal (MA)
Neugebauer
Norton
Nunes
Nye
Oberstar
Obey
Olson
Olver
Ortiz
Owens
Pallone
Pascrell
Pastor (AZ)
Paulsen
Payne
Pence
Perlmutter
Perriello
Peters
Peterson
Petri
Pierluisi
Pingree (ME)
Pitts
Platts
Poe (TX)
Polis (CO)
Pomeroy
Posey
Price (GA)
Price (NC)
Putnam
Quigley
Radanovich
Rahall
Rangel
Rehberg
Reichert
Reyes
Richardson
Rodriguez
Roe (TN)
Rogers (AL)
Rogers (KY)
Rogers (MI)
Rohrabacher
Rooney
Ros-Lehtinen
Roskam
Ross
Rothman (NJ)
Roybal-Allard
Royce
Ruppersberger
Rush

Ryan (OH)
Ryan (WI)
Sablan
Salazar
Sánchez, Linda T.
Sanchez, Loretta
Sarbanes
Scalise
Schakowsky
Schauer
Schiff
Schmidt
Schock
Schrader
Schwartz
Scott (GA)
Scott (VA)
Sensenbrenner
Serrano
Sessions
Sestak
Shadegg
Shea-Porter
Shimkus
Shuler
Shuster
Simpson
Sires
Skelton
Slaughter
Smith (NE)
Smith (NJ)
Smith (TX)
Smith (WA)
Snyder
Space
Speier
Spratt
Stark
Stupak
Sullivan
Sutton
Tanner
Taylor
Teague
Terry
Thompson (CA)
Thompson (MS)
Thompson (PA)
Thornberry
Tiahrt
Tiberi
Tierney
Titus
Tonko
Towns
Tsongas
Turner
Upton
Van Hollen
Velázquez
Visclosky
Walden
Walz
Wasserman Schultz
Waters
Watson
Watt
Weiner
Welch
Westmoreland
Whitfield
Wilson (OH)
Wilson (SC)
Wittman
Wolf
Woolsey
Wu
Yarmuth
Young (AK)
Young (FL)

NOES—6

Burgess
Flake
Lummis
McClintock
Nadler (NY)
Paul

NOT VOTING—13

Barrett (SC)
Carney
Cole
Davis (AL)
Garrett (NJ)
Hoekstra
Jackson Lee (TX)
Moore (WI)
Sherman
Souder
Stearns
Wamp
Waxman

□ 1756

Mr. RYAN of Wisconsin changed his vote from ''no'' to ''aye.''

So the amendment was agreed to.

The result of the vote was announced as above recorded.

Stated for:

Mr. STEARNS. Mr. Chair, on rollcall No. 262 I was unavoidably detained. Had I been present, I would have voted "yes."

AMENDMENT NO. 6 OFFERED BY MR. HALL OF TEXAS

The Acting CHAIR. The unfinished business is the demand for a recorded vote on the amendment offered by the gentleman from Texas (Mr. HALL) on which further proceedings were postponed and on which the noes prevailed by voice vote.

The Clerk will redesignate the amendment.

The Clerk redesignated the amendment.

RECORDED VOTE

The Acting CHAIR. A recorded vote has been demanded.

A recorded vote was ordered.

The Acting CHAIR. This is a 5-minute vote.

The vote was taken by electronic device, and there were—ayes 163, noes 258, not voting 15, as follows:

[Roll No. 263]

AYES—163

Aderholt
Akin
Alexander
Austria
Bachmann
Bachus
Barton (TX)
Biggert
Bilbray
Bilirakis
Bishop (UT)
Blackburn
Blunt
Boehner
Bonner
Bono Mack
Boozman
Boustany
Brady (TX)
Broun (GA)
Brown (SC)
Brown-Waite, Ginny
Buchanan
Burgess
Burton (IN)
Buyer
Calvert
Camp
Campbell
Cantor
Capito
Carter
Cassidy
Chaffetz
Coble
Coffman (CO)
Conaway
Crenshaw
Culberson
Davis (KY)
Dent
Diaz-Balart, L.
Diaz-Balart, M.
Dreier
Duncan
Emerson
Fallin
Flake
Fleming
Forbes
Foxx
Franks (AZ)
Frelinghuysen
Gallegly
Gerlach
Gingrey (GA)
Gohmert
Goodlatte
Granger
Graves
Griffith
Guthrie
Hall (TX)
Harper
Hastings (WA)
Heller
Hensarling
Herger
Hunter
Inglis
Issa
Jenkins
Johnson (IL)
Johnson, Sam
Jones
Jordan (OH)
King (IA)
King (NY)
Kingston
Kirk
Kline (MN)
Lamborn
Lance
Latham
LaTourette
Latta
Lewis (CA)
Linder
LoBiondo
Lucas
Luetkemeyer
Lungren, Daniel E.
Mack
Manzullo
Marchant
McCarthy (CA)
McCaul
McClintock
McCotter
McHenry
McKeon
McMorris Rodgers
Mica
Miller (FL)
Miller (MI)
Miller, Gary
Moran (KS)
Murphy, Tim
Myrick
Neugebauer
Nunes
Olson
Paul
Paulsen
Pence
Petri
Pitts
Platts
Poe (TX)
Posey
Price (GA)
Putnam
Radanovich
Rehberg
Richardson
Roe (TN)
Rogers (AL)
Rogers (KY)
Rogers (MI)
Rohrabacher
Rooney
Ros-Lehtinen
Roskam
Royce
Ryan (WI)
Scalise
Schmidt
Schock
Sensenbrenner
Shadegg
Shimkus
Shuster
Simpson
Smith (NE)
Smith (NJ)
Smith (TX)
Stearns
Sullivan
Taylor
Terry
Thompson (PA)
Thornberry
Tiahrt
Tiberi
Turner
Upton
Walden
Westmoreland
Whitfield
Wilson (SC)
Wittman
Young (AK)
Young (FL)

NOES—258

Ackerman
Adler (NJ)
Altmire
Andrews
Arcuri
Baca
Baird
Baldwin
Barrow
Bartlett
Bean
Becerra
Berkley
Berman
Berry
Bishop (GA)
Bishop (NY)
Blumenauer
Boccieri
Bordallo
Boren
Boswell
Boucher
Boyd
Brady (PA)
Braley (IA)
Bright
Brown, Corrine
Butterfield
Cao
Capps
Capuano
Cardoza
Carnahan
Carson (IN)
Castle
Castor (FL)
Chandler
Childers
Christensen
Chu
Clarke
Clay
Cleaver
Clyburn
Cohen
Connolly (VA)
Conyers
Cooper
Costa
Costello
Courtney
Crowley
Cuellar
Cummings
Dahlkemper
Davis (CA)
Davis (IL)
Davis (TN)
DeFazio
DeGette
Delahunt
DeLauro
Deutch
Dicks
Dingell
Doggett
Donnelly (IN)
Doyle
Driehaus
Edwards (MD)
Edwards (TX)
Ehlers
Ellison
Ellsworth
Engel
Eshoo
Etheridge
Faleomavaega
Farr
Fattah
Filner
Fortenberry
Foster
Frank (MA)
Fudge
Garamendi
Giffords
Gonzalez
Gordon (TN)
Grayson
Green, Al
Green, Gene
Grijalva
Gutierrez
Hall (NY)
Halvorson
Hare
Harman
Hastings (FL)
Heinrich
Herseth Sandlin
Higgins
Hill
Himes
Hinchey
Hinojosa
Hirono
Hodes
Holden
Holt
Honda
Hoyer
Inslee
Israel
Jackson (IL)
Johnson (GA)
Johnson, E. B.
Kagen
Kanjorski
Kaptur
Kennedy
Kildee
Kilpatrick (MI)
Kilroy
Kind
Kirkpatrick (AZ)
Kissell
Klein (FL)
Kosmas
Kratovil
Kucinich
Langevin
Larsen (WA)
Larson (CT)
Lee (CA)
Lee (NY)
Levin
Lipinski
Loebsack
Lofgren, Zoe
Lowey
Luján
Lynch
Maffei
Maloney
Markey (CO)
Markey (MA)
Marshall
Matheson
Matsui
McCarthy (NY)
McCollum
McDermott
McGovern
McIntyre
McMahon
McNerney
Meek (FL)
Meeks (NY)
Melancon
Michaud
Miller (NC)
Miller, George
Minnick
Mitchell
Mollohan
Moore (KS)
Moran (VA)
Murphy (CT)
Murphy (NY)
Murphy, Patrick
Nadler (NY)
Napolitano
Neal (MA)
Norton
Nye
Oberstar
Obey
Olver
Ortiz
Owens
Pallone
Pascrell
Pastor (AZ)
Payne
Perlmutter
Perriello
Peters
Peterson
Pierluisi
Pingree (ME)
Polis (CO)
Pomeroy
Price (NC)
Quigley
Rahall
Rangel
Reichert
Reyes
Rodriguez
Ross
Rothman (NJ)
Roybal-Allard
Ruppersberger
Rush
Ryan (OH)
Sablan
Salazar
Sánchez, Linda T.
Sanchez, Loretta
Sarbanes
Schakowsky
Schauer
Schiff
Schrader
Schwartz
Scott (GA)
Scott (VA)
Serrano
Sestak
Shea-Porter
Shuler
Sires
Skelton
Slaughter
Smith (WA)
Snyder
Space
Speier
Spratt
Stark
Stupak
Sutton
Tanner
Teague
Thompson (CA)
Thompson (MS)
Tierney
Titus
Tonko
Towns
Tsongas
Van Hollen
Velázquez
Visclosky
Walz
Wasserman Schultz
Waters
Watson
Waxman
Weiner
Welch
Wilson (OH)
Wolf
Woolsey
Wu
Yarmuth

NOT VOTING—15

Barrett (SC)
Carney
Cole
Davis (AL)
Garrett (NJ)
Hoekstra
Jackson Lee (TX)
Lewis (GA)
Lummis
Moore (WI)
Sessions
Sherman
Souder
Wamp
Watt

ANNOUNCEMENT BY THE ACTING CHAIR

The Acting CHAIR (during the vote). Members have 2 minutes remaining in this vote.

□ 1804

Mr. CLEAVER and Ms. WATERS changed their voted from ''aye'' to ''no.''

So the amendment was rejected.

The result of the vote was announced as above recorded.

(By unanimous consent, Mr. REICHERT was allowed to speak out of order.)

MOMENT OF SILENCE HONORING FALLEN LAW ENFORCEMENT OFFICERS

Mr. REICHERT. Mr. Chairman, if I could have everyone's solemn attention, please.

As many of you know, this week is Law Enforcement Memorial Week. As I said earlier in the year when we lost four police officers in one shooting in Washington State, it's a time when all of us should stop and recognize and realize what our law enforcement family does for us each and every day.

Those Capitol Hill Police that are around us here in this building, outside these doors, the Washington, D.C., police officers who protect us to and from our place of work and to our homes and other places that we travel, we have a safe community as a result of men and women wanting to put themselves in harm's way and sometimes sacrificing their lives.

I was one of those for 33 years. I am proud to say that. As a sheriff's deputy in 1972, finally as the sheriff before coming here to Congress, I am proud to be a part of the law enforcement family. We are brothers and sisters. And being a police officer, as my friend, the

sheriff from Indiana, Sheriff ELLSWORTH, knows, it transcends everything. The cop world doesn't mean being Democrat or Republican. Being a cop doesn't mean I am a Catholic, I am a Lutheran, I am a Mormon. It doesn't mean any of those things. It means that we are men and women together as a family and a team, putting our lives on the line for people in this Nation every day.

In this year, 126 police officers were killed in the line of duty. And in Washington State alone we lost seven. So I would join with my friend Sheriff ELLSWORTH, the two sheriffs in the House, in a moment of silence, and I would yield time to Sheriff ELLSWORTH.

Mr. ELLSWORTH. Mr. Chairman, I would like to thank my friend Sheriff REICHERT, and it's appropriate today to call him by the original title at this time, for yielding me that time. I would echo his comments. Everyone in this room interacts with the Capitol Police every day. I know I made a friend in one. He gave me a t-shirt that on the back says, ''You Elect Them, We Protect Them.'' And I wear that shirt proudly at home.

But on this serious day during National Police Week, it's important to know in this House we talk a lot about our brave men and women in uniform that protect our country, and we normally talk about the members of the armed services, and that's absolutely appropriate. But during this week I think we need to also think about the men and women in uniform who are out patrolling our streets, not just the Capitol Police, but at home in all of our districts that are working right now directing traffic, taking drug dealers off the streets, protecting our wives, protecting our families, protecting our husbands, protecting our citizens, the people we represent. We should never forget them for their constant service, 24–7 service to us and all of our constituents.

So today if we could honor them with a moment of silence, for those who did pay the ultimate price, that did give their lives in the line of duty, I would ask for that moment of silence from the House of Representatives.

The Acting CHAIR. Members are asked to rise for a moment of silence in honor of our fallen law enforcement officers.

AMENDMENT NO. 10 OFFERED BY MR. MARKEY OF MASSACHUSETTS

The Acting CHAIR. Without objection, 5-minute voting will continue.

There was no objection.

The Acting CHAIR. The unfinished business is the demand for a recorded vote on the amendment offered by the gentleman from Massachusetts (Mr. MARKEY) on which further proceedings were postponed and on which the ayes prevailed by voice vote.

The Clerk will redesignate the amendment.

The Clerk redesignated the amendment.

RECORDED VOTE

The Acting CHAIR. A recorded vote has been demanded.

A recorded vote was ordered.

The Acting CHAIR. This is a 5-minute vote.

The vote was taken by electronic device, and there were—ayes 254, noes 173, not voting 9, as follows:

[Roll No. 264]

AYES—254

Ackerman
Adler (NJ)
Altmire
Andrews
Arcuri
Baca
Baird
Baldwin
Barrow
Bean
Becerra
Berkley
Berman
Berry
Bishop (GA)
Bishop (NY)
Blumenauer
Boccieri
Bordallo
Boren
Boswell
Boucher
Boyd
Brady (PA)
Braley (IA)
Bright
Brown, Corrine
Butterfield
Capps
Capuano
Carnahan
Carson (IN)
Castor (FL)
Chandler
Childers
Christensen
Chu
Clarke
Clay
Cleaver
Clyburn
Cohen
Connolly (VA)
Conyers
Cooper
Costello
Courtney
Crowley
Cuellar
Cummings
Dahlkemper
Davis (CA)
Davis (IL)
Davis (TN)
DeFazio
DeGette
Delahunt
DeLauro
Deutch
Dicks
Dingell
Doggett
Donnelly (IN)
Doyle
Driehaus
Edwards (MD)
Edwards (TX)
Ellison
Ellsworth
Engel
Eshoo
Etheridge
Faleomavaega
Farr
Fattah
Filner
Foster
Frank (MA)
Fudge
Garamendi
Giffords
Gonzalez
Gordon (TN)
Grayson
Green, Al
Green, Gene
Grijalva
Gutierrez
Hall (NY)
Halvorson
Hare
Harman
Hastings (FL)
Heinrich
Herseth Sandlin
Higgins
Hill
Himes
Hinchey
Hinojosa
Hirono
Hodes
Holden
Holt
Honda
Hoyer
Inslee
Israel
Jackson (IL)
Johnson (GA)
Johnson (IL)
Johnson, E. B.
Kagen
Kanjorski
Kaptur
Kennedy
Kildee
Kilpatrick (MI)
Kilroy
Kind
Kirkpatrick (AZ)
Kissell
Klein (FL)
Kosmas
Kratovil
Kucinich
Langevin
Larsen (WA)
Larson (CT)
Lee (CA)
Levin
Lewis (GA)
Lipinski
Loebsack
Lofgren, Zoe
Lowey
Luján
Lynch
Maffei
Maloney
Markey (CO)
Markey (MA)
Marshall
Matheson
Matsui
McCarthy (NY)
McCollum
McDermott
McGovern
McIntyre
McMahon
McNerney
Meek (FL)
Meeks (NY)
Melancon
Michaud
Miller (NC)
Miller, George
Minnick
Mitchell
Mollohan
Moore (KS)
Moore (WI)
Moran (VA)
Murphy (CT)
Murphy (NY)
Murphy, Patrick
Nadler (NY)
Napolitano
Neal (MA)
Norton
Nye
Oberstar
Obey
Olver
Ortiz
Owens
Pallone
Pascrell
Pastor (AZ)
Payne
Perlmutter
Perriello
Peterson
Pierluisi
Pingree (ME)
Polis (CO)
Pomeroy
Price (NC)
Quigley
Rahall
Rangel
Reyes
Richardson
Rodriguez
Ross
Rothman (NJ)
Roybal-Allard
Ruppersberger
Rush
Ryan (OH)
Sablan
Salazar
Sánchez, Linda T.
Sanchez, Loretta
Sarbanes
Schakowsky
Schauer
Schiff
Schrader
Schwartz
Scott (GA)
Scott (VA)
Serrano
Sestak
Shea-Porter
Sherman
Shuler
Sires
Skelton
Slaughter
Smith (WA)
Snyder
Space
Speier
Spratt
Stark
Stupak
Sutton
Tanner
Taylor
Teague
Thompson (CA)
Thompson (MS)
Tierney
Titus
Tonko
Towns
Tsongas
Van Hollen
Velázquez
Visclosky
Walz
Wasserman Schultz
Waters
Watson
Watt
Waxman
Weiner
Welch
Wilson (OH)
Woolsey
Wu
Yarmuth

NOES—173

Aderholt
Akin
Alexander
Austria
Bachmann
Bachus
Bartlett
Barton (TX)
Biggert
Bilbray
Bilirakis
Bishop (UT)
Blackburn
Blunt
Boehner
Bonner
Bono Mack
Boozman
Boustany
Brady (TX)
Broun (GA)
Brown (SC)
Brown-Waite, Ginny
Buchanan
Burgess
Burton (IN)
Buyer
Calvert
Camp
Campbell
Cantor
Cao
Capito
Cardoza
Carter
Cassidy
Castle
Chaffetz
Coble
Coffman (CO)
Conaway
Costa
Crenshaw
Culberson
Davis (KY)
Dent
Diaz-Balart, L.
Diaz-Balart, M.
Dreier
Duncan
Ehlers
Emerson
Fallin
Flake
Fleming
Forbes
Fortenberry
Foxx
Franks (AZ)
Frelinghuysen
Gallegly
Gerlach
Gingrey (GA)
Gohmert
Goodlatte
Granger
Graves
Griffith
Guthrie
Hall (TX)
Harper
Hastings (WA)
Heller
Hensarling
Herger
Hunter
Inglis
Issa
Jenkins
Johnson, Sam
Jones
Jordan (OH)
King (IA)
King (NY)
Kingston
Kirk
Kline (MN)
Lamborn
Lance
Latham
LaTourette
Latta
Lee (NY)
Lewis (CA)
Linder
LoBiondo
Lucas
Luetkemeyer
Lummis
Lungren, Daniel E.
Mack
Manzullo
Marchant
McCarthy (CA)
McCaul
McClintock
McCotter
McHenry
McKeon
McMorris Rodgers
Mica
Miller (FL)
Miller (MI)
Miller, Gary
Moran (KS)
Murphy, Tim
Myrick
Neugebauer
Nunes
Olson
Paul
Paulsen
Pence
Peters
Petri
Pitts
Platts
Poe (TX)
Posey
Price (GA)
Putnam
Radanovich
Rehberg
Reichert
Roe (TN)
Rogers (AL)
Rogers (KY)
Rogers (MI)
Rohrabacher
Rooney
Ros-Lehtinen
Roskam
Royce
Ryan (WI)
Scalise
Schmidt
Schock
Sensenbrenner
Sessions
Shadegg
Shimkus
Shuster
Simpson
Smith (NE)
Smith (NJ)
Smith (TX)
Stearns
Sullivan
Terry
Thompson (PA)
Thornberry
Tiahrt
Tiberi
Turner
Upton
Walden
Westmoreland
Whitfield
Wilson (SC)
Wittman
Wolf
Young (AK)
Young (FL)

NOT VOTING—9

Barrett (SC)
Carney
Cole
Davis (AL)
Garrett (NJ)
Hoekstra
Jackson Lee (TX)
Souder
Wamp

ANNOUNCEMENT BY THE ACTING CHAIR

The Acting CHAIR (during the vote). There are 2 minutes remaining.

□ 1817

Mr. FORTENBERRY changed his vote from ''aye'' to ''no.''

So the amendment was agreed to.

The result of the vote was announced as above recorded.

AMENDMENT NO. 12 OFFERED BY MR. GEORGE MILLER OF CALIFORNIA

The Acting CHAIR. The unfinished business is the demand for a recorded vote on the amendment offered by the gentleman from California (Mr. GEORGE MILLER) on which further proceedings were postponed and on which the ayes prevailed by voice vote.

The Clerk will redesignate the amendment.

The Clerk redesignated the amendment.

RECORDED VOTE

The Acting CHAIR. A recorded vote has been demanded.

A recorded vote was ordered.

The Acting CHAIR. This is a 5-minute vote.

The vote was taken by electronic device, and there were—ayes 250, noes 174, not voting 12, as follows:

[Roll No. 265]

AYES—250

Ackerman
Adler (NJ)
Altmire
Andrews
Arcuri
Baca
Baldwin
Barrow
Bean
Becerra
Berkley
Berman
Berry
Bishop (GA)
Bishop (NY)
Blumenauer
Boccieri
Bordallo
Boren
Boswell
Boucher
Boyd
Brady (PA)
Braley (IA)
Brown, Corrine
Butterfield
Capps
Capuano
Cardoza
Carnahan
Carson (IN)
Castor (FL)
Chandler
Christensen
Chu
Clarke
Clay
Cleaver
Clyburn
Cohen
Connolly (VA)
Conyers
Costello
Courtney
Crowley
Cuellar
Cummings
Dahlkemper
Davis (CA)
Davis (IL)
Davis (TN)
DeFazio
DeGette
Delahunt
DeLauro
Deutch
Diaz-Balart, L.
Diaz-Balart, M.
Dicks
Dingell
Doggett
Donnelly (IN)
Doyle
Driehaus
Edwards (MD)
Ellison
Ellsworth
Engel
Eshoo
Faleomavaega
Farr
Fattah
Filner
Foster
Frank (MA)
Fudge
Garamendi
Giffords
Gonzalez
Gordon (TN)
Grayson
Green, Al
Green, Gene
Grijalva
Gutierrez
Hall (NY)
Halvorson
Hare
Harman
Hastings (FL)
Heinrich
Herseth Sandlin
Higgins
Hill
Himes
Hinchey
Hinojosa
Hirono
Hodes
Holden
Holt
Honda
Hoyer
Inslee
Israel
Jackson (IL)
Johnson (GA)
Johnson, E. B.
Kagen
Kanjorski
Kaptur
Kennedy
Kildee
Kilpatrick (MI)
Kilroy
Kirkpatrick (AZ)
Kissell
Klein (FL)
Kosmas
Kratovil
Kucinich
Langevin
Larsen (WA)
Larson (CT)
LaTourette
Lee (CA)
Levin
Lewis (GA)
Lipinski
Loebsack
Lofgren, Zoe
Lowey
Luján
Lynch
Maffei
Maloney
Markey (CO)
Markey (MA)
Marshall
Matheson
Matsui
McCarthy (NY)
McCollum
McCotter
McDermott
McGovern
McMahon
McNerney
Meek (FL)
Meeks (NY)
Melancon
Michaud
Miller (MI)
Miller (NC)
Miller, George
Minnick
Mollohan
Moore (KS)
Moore (WI)
Moran (VA)
Murphy (CT)
Murphy (NY)
Murphy, Patrick
Murphy, Tim
Nadler (NY)
Napolitano
Neal (MA)
Norton
Nye
Oberstar
Obey
Olver
Ortiz
Owens
Pallone
Pascrell
Pastor (AZ)
Payne
Perlmutter
Perriello
Peters
Peterson
Pierluisi
Pingree (ME)
Platts
Polis (CO)
Pomeroy
Price (NC)
Quigley
Rahall
Rangel
Reyes
Richardson
Rodriguez
Ross
Rothman (NJ)
Roybal-Allard
Ruppersberger
Rush
Ryan (OH)
Sablan
Salazar
Sánchez, Linda T.
Sarbanes
Schakowsky
Schauer
Schiff
Schrader
Schwartz
Scott (GA)
Scott (VA)
Serrano
Sestak
Shea-Porter
Sherman
Sires
Skelton
Slaughter
Smith (WA)
Space
Speier
Spratt
Stark
Stupak
Sutton
Tanner
Teague
Thompson (CA)
Thompson (MS)
Tiberi
Tierney
Titus
Tonko
Towns
Tsongas
Turner
Van Hollen
Velázquez
Visclosky
Walz
Wasserman Schultz
Watson
Watt
Waxman
Weiner
Welch
Wilson (OH)
Woolsey
Wu
Yarmuth

NOES—174

Aderholt
Akin
Alexander
Austria
Bachmann
Bachus
Baird
Bartlett
Barton (TX)
Biggert
Bilbray
Bilirakis
Bishop (UT)
Blackburn
Blunt
Boehner
Bonner
Bono Mack
Boozman
Boustany
Brady (TX)
Bright
Broun (GA)
Brown (SC)
Brown-Waite, Ginny
Buchanan
Burgess
Burton (IN)
Buyer
Calvert
Camp
Campbell
Cantor
Cao
Capito
Carter
Cassidy
Castle
Chaffetz
Childers
Coble
Coffman (CO)
Conaway
Cooper
Costa
Crenshaw
Culberson
Davis (KY)
Dent
Dreier
Duncan
Edwards (TX)
Ehlers
Emerson
Etheridge
Fallin
Flake
Fleming
Forbes
Fortenberry
Foxx
Frelinghuysen
Gallegly
Garrett (NJ)
Gerlach
Gingrey (GA)
Gohmert
Goodlatte
Granger
Graves
Griffith
Guthrie
Hall (TX)
Harper
Hastings (WA)
Heller
Hensarling
Herger
Hunter
Inglis
Issa
Jenkins
Johnson (IL)
Johnson, Sam
Jones
Jordan (OH)
Kind
King (IA)
King (NY)
Kingston
Kirk
Kline (MN)
Lamborn
Lance
Latham
Latta
Lee (NY)
Lewis (CA)
Linder
LoBiondo
Lucas
Luetkemeyer
Lummis
Lungren, Daniel E.
Mack
Manzullo
Marchant
McCarthy (CA)
McCaul
McClintock
McHenry
McIntyre
McKeon
McMorris Rodgers
Mica
Miller (FL)
Miller, Gary
Mitchell
Moran (KS)
Myrick
Neugebauer
Nunes
Olson
Paul
Paulsen
Pence
Petri
Pitts
Poe (TX)
Posey
Price (GA)
Putnam
Rehberg
Reichert
Roe (TN)
Rogers (AL)
Rogers (KY)
Rogers (MI)
Rohrabacher
Rooney
Ros-Lehtinen
Roskam
Royce
Ryan (WI)
Scalise
Schmidt
Schock
Sensenbrenner
Sessions
Shadegg
Shimkus
Shuler
Shuster
Simpson
Smith (NE)
Smith (NJ)
Smith (TX)
Snyder
Stearns
Sullivan
Taylor
Terry
Thompson (PA)
Thornberry
Tiahrt
Upton
Walden
Westmoreland
Whitfield
Wilson (SC)
Wittman
Wolf
Young (AK)
Young (FL)

NOT VOTING—12

Barrett (SC)
Carney
Cole
Davis (AL)
Franks (AZ)
Hoekstra
Jackson Lee (TX)
Radanovich
Sanchez, Loretta
Souder
Wamp
Waters

ANNOUNCEMENT BY THE ACTING CHAIR

The Acting CHAIR (during the vote). Members have 2 minutes remaining in this vote.

□ 1823

So the amendment was agreed to.

The result of the vote was announced as above recorded.

AMENDMENT NO. 13 OFFERED BY MR. REYES

The Acting CHAIR. The unfinished business is the demand for a recorded vote on the amendment offered by the gentleman from Texas (Mr. REYES) on which further proceedings were postponed and on which the ayes prevailed by voice vote.

The Clerk will redesignate the amendment.

The Clerk redesignated the amendment.

RECORDED VOTE

The Acting CHAIR. A recorded vote has been demanded.

A recorded vote was ordered.

The Acting CHAIR. This is a 5-minute vote.

The vote was taken by electronic device, and there were—ayes 413, noes 10, not voting 13, as follows:

[Roll No. 266]

AYES—413

Ackerman
Aderholt
Adler (NJ)
Akin
Alexander
Altmire
Andrews
Arcuri
Austria
Baca
Bachmann
Bachus
Baird
Baldwin
Barrow
Bartlett
Barton (TX)
Bean
Becerra
Berkley
Berman
Berry
Biggert
Bilbray
Bilirakis
Bishop (GA)
Bishop (NY)
Bishop (UT)
Blackburn
Blumenauer
Blunt
Boccieri
Boehner
Bonner
Bono Mack
Boozman
Bordallo
Boren
Boswell
Boucher
Boustany
Boyd
Brady (PA)
Brady (TX)
Braley (IA)
Bright
Brown (SC)
Brown, Corrine
Brown-Waite, Ginny
Buchanan
Burton (IN)
Butterfield
Buyer
Calvert
Camp
Campbell
Cantor
Cao
Capito
Capps
Capuano
Cardoza
Carnahan
Carson (IN)
Carter
Cassidy
Castle
Castor (FL)
Chaffetz
Chandler
Childers
Christensen
Chu
Clarke
Clay
Cleaver
Clyburn
Coble
Coffman (CO)
Cohen
Conaway
Connolly (VA)
Conyers
Cooper
Costa
Costello
Courtney
Crenshaw
Crowley
Cuellar
Culberson
Cummings
Dahlkemper
Davis (CA)
Davis (IL)
Davis (KY)
Davis (TN)
DeFazio
DeGette
Delahunt
DeLauro
Dent
Deutch
Diaz-Balart, L.
Diaz-Balart, M.
Dicks
Dingell
Doggett
Donnelly (IN)
Doyle
Dreier
Driehaus
Duncan
Edwards (MD)
Edwards (TX)
Ehlers
Ellison
Ellsworth
Emerson
Engel
Eshoo
Etheridge
Faleomavaega
Fallin
Farr
Fattah
Filner
Fleming
Forbes
Fortenberry
Foster
Foxx
Frank (MA)
Franks (AZ)
Frelinghuysen
Fudge
Gallegly
Garamendi
Garrett (NJ)
Gerlach
Giffords
Gohmert
Gonzalez
Goodlatte
Gordon (TN)
Granger
Graves
Grayson
Green, Al
Green, Gene
Griffith
Grijalva
Guthrie
Gutierrez
Hall (NY)
Hall (TX)
Halvorson
Hare
Harman
Harper
Hastings (FL)
Hastings (WA)
Heinrich
Heller
Hensarling
Herger
Herseth Sandlin
Higgins
Hill
Himes
Hinchey
Hinojosa
Hirono
Hodes
Holden
Holt
Honda
Hoyer
Hunter
Inglis
Inslee
Israel
Issa
Jackson (IL)
Jenkins
Johnson (GA)
Johnson (IL)
Johnson, E. B.
Jones
Jordan (OH)
Kagen
Kanjorski
Kaptur
Kennedy
Kildee
Kilpatrick (MI)
Kilroy
Kind
King (IA)
King (NY)
Kingston
Kirk
Kirkpatrick (AZ)
Kissell
Klein (FL)
Kline (MN)
Kosmas
Kratovil
Kucinich
Lamborn
Lance
Langevin
Larsen (WA)
Larson (CT)
Latham
LaTourette
Latta
Lee (CA)
Lee (NY)
Levin
Lewis (CA)
Lewis (GA)
Linder
Lipinski
LoBiondo
Loebsack
Lofgren, Zoe
Lowey
Lucas
Luetkemeyer
Luján
Lummis
Lungren, Daniel E.
Lynch
Mack
Maffei
Maloney
Manzullo
Marchant
Markey (CO)
Markey (MA)
Marshall
Matheson
Matsui
McCarthy (CA)
McCarthy (NY)
McCaul
McCollum
McCotter
McDermott
McGovern
McHenry
McIntyre
McKeon
McMahon
McMorris Rodgers
McNerney
Meek (FL)
Meeks (NY)
Melancon
Mica
Michaud
Miller (FL)
Miller (MI)
Miller (NC)
Miller, George
Minnick

Mitchell
Mollohan
Moore (KS)
Moore (WI)
Moran (KS)
Moran (VA)
Murphy (CT)
Murphy (NY)
Murphy, Patrick
Murphy, Tim
Myrick
Nadler (NY)
Napolitano
Neal (MA)
Neugebauer
Norton
Nunes
Nye
Oberstar
Obey
Olson
Ortiz
Owens
Pallone
Pascrell
Pastor (AZ)
Paul
Paulsen
Payne
Pence
Perlmutter
Perriello
Peters
Peterson
Petri
Pierluisi
Pingree (ME)
Pitts
Platts
Poe (TX)
Polis (CO)
Pomeroy
Posey
Price (GA)
Price (NC)
Putnam
Quigley
Rahall
Rangel
Rehberg
Reichert
Reyes
Richardson
Rodriguez
Roe (TN)
Rogers (AL)
Rogers (KY)
Rogers (MI)
Rooney
Ros-Lehtinen
Roskam
Ross
Rothman (NJ)
Roybal-Allard
Ruppersberger
Rush
Ryan (OH)
Ryan (WI)
Sablan
Salazar
Sánchez, Linda T.
Sanchez, Loretta
Sarbanes
Scalise
Schakowsky
Schauer
Schiff
Schmidt
Schock
Schrader
Schwartz
Scott (GA)
Scott (VA)
Sensenbrenner
Serrano
Sestak
Shadegg
Shea-Porter
Sherman
Shimkus
Shuler
Shuster
Simpson
Sires
Skelton
Slaughter
Smith (NE)
Smith (TX)
Smith (WA)
Snyder
Space
Speier
Spratt
Stark
Stearns
Stupak
Sullivan
Sutton
Tanner
Taylor
Teague
Terry
Thompson (CA)
Thompson (MS)
Thompson (PA)
Thornberry
Tiahrt
Tiberi
Tierney
Titus
Tonko
Towns
Tsongas
Turner
Upton
Van Hollen
Velázquez
Visclosky
Walden
Walz
Wasserman Schultz
Watson
Watt
Waxman
Weiner
Welch
Westmoreland
Whitfield
Wilson (OH)
Wilson (SC)
Wittman
Wolf
Woolsey
Wu
Yarmuth
Young (FL)

NOES—10

Broun (GA)
Burgess
Flake
Johnson, Sam
McClintock
Miller, Gary
Rohrabacher
Royce
Sessions
Young (AK)

NOT VOTING—13

Barrett (SC)
Carney
Cole
Davis (AL)
Gingrey (GA)
Hoekstra
Jackson Lee (TX)
Olver
Radanovich
Smith (NJ)
Souder
Wamp
Waters

ANNOUNCEMENT BY THE ACTING CHAIR

The Acting CHAIR (during the vote). Members have 2 minutes remaining on this vote.

□ 1831

Mr. GRIFFITH changed his vote from ''no'' to ''aye.''

So the amendment was agreed to.

The result of the vote was announced as above recorded.

□ 1830

Mr. GORDON of Tennessee. Mr. Chairman, I move that the Committee do now rise.

The motion was agreed to.

Accordingly, the Committee rose; and the Speaker pro tempore (Mr. GARAMENDI) having assumed the chair, Mr. DRIEHAUS, Acting Chair of the Committee of the Whole House on the State of the Union, reported that that Committee, having had under consideration the bill (H.R. 5116) to invest in innovation through research and development, to improve the competitiveness of the United States, and for other purposes, had come to no resolution thereon.

MESSAGE FROM THE PRESIDENT

A message in writing from the President of the United States was communicated to the House by Mr. Brian Pate, one of his secretaries.

ANNOUNCEMENT BY THE SPEAKER PRO TEMPORE

The SPEAKER pro tempore. Pursuant to clause 8 of rule XX, the Chair will postpone further proceedings today on motions to suspend the rules on which a recorded vote or the yeas and nays are ordered, or on which the vote incurs objection under clause 6 of rule XX.

Record votes on postponed questions will be taken later in the week.

LORD'S RESISTANCE ARMY DISARMAMENT AND NORTHERN UGANDA RECOVERY ACT OF 2009

Mr. ENGEL. Mr. Speaker, I move to suspend the rules and pass the bill (S. 1067) to support stabilization and lasting peace in northern Uganda and areas affected by the Lord's Resistance Army through development of a regional strategy to support multilateral efforts to successfully protect civilians and eliminate the threat posed by the Lord's Resistance Army and to authorize funds for humanitarian relief and reconstruction, reconciliation, and transitional justice, and for other purposes.

The Clerk read the title of the bill.

The text of the bill is as follows:

S. 1067

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Lord's Resistance Army Disarmament and Northern Uganda Recovery Act of 2009''.

SEC. 2. FINDINGS.

Congress makes the following findings:

(1) For over 2 decades, the Government of Uganda engaged in an armed conflict with the Lord's Resistance Army (LRA) in northern Uganda that led to the internal displacement of more than 2,000,000 Ugandans from their homes.

(2) The members of the Lord's Resistance Army used brutal tactics in northern Uganda, including mutilating, abducting and forcing individuals into sexual servitude and forcing a large number of children and youth in Uganda, estimated by the Survey for War Affected Youth to be over 66,000, to fight as part of the rebel force.

(3) The Secretary of State has placed the Lord's Resistance Army on the Terrorist Exclusion list pursuant to section 212(a)(3) of the Immigration and Nationality Act (8 U.S.C. 1182(a)(3)), and LRA leader Joseph Kony has been designated a ''specially designated global terrorist'' pursuant to Executive Order 13224.

(4) In late 2005, according to the United Nations Office for Coordination of Humanitarian Affairs, the Lord's Resistance Army shifted their primary base of operations from southern Sudan to northeastern Democratic Republic of Congo, and the rebels have since withdrawn from northern Uganda.

(5) Representatives of the Government of Uganda and the Lord's Resistance Army began peace negotiations in 2006, mediated by the Government of Southern Sudan in Juba, Sudan, and signed the Cessation of Hostilities Agreement on August 20, 2006, which provided for hundreds of thousands of internally displaced people to return home in safety.

(6) After nearly 2 years of negotiations, representatives from the parties reached the Final Peace Agreement in April 2008, but Joseph Kony, the leader of the Lord's Resistance Army, refused to sign the Final Peace Agreement in May 2008 and his forces launched new attacks in northeastern Congo.

(7) According to the United Nations Office for the Coordination of Humanitarian Relief and the United Nations High Commissioner for Refugees, the new activity of the Lord's Resistance Army in northeastern Congo and southern Sudan since September 2008 has led to the abduction of at least 1,500 civilians, including hundreds of children, and the displacement of more than 540,000 people.

(8) In December 2008, the military forces of Uganda, the Democratic Republic of Congo, and southern Sudan launched a joint operation against the Lord's Resistance Army's bases in northeastern Congo, but the operation failed to apprehend Joseph Kony, and his forces retaliated with a series of new attacks and massacres in Congo and southern Sudan, killing an estimated 900 people in 2 months alone.

(9) Despite the refusal of Joseph Kony to sign the Final Peace Agreement, the Government of Uganda has committed to continue reconstruction plans for northern Uganda, and to implement those mechanisms of the Final Peace Agreement not conditional on the compliance of the Lord's Resistance Army.

(10) Since 2008, recovery efforts in northern Uganda have moved forward with the financial support of the United States and other donors, but have been hampered by a lack of strategic coordination, logistical delays, and limited leadership from the Government of Uganda.

SEC. 3. STATEMENT OF POLICY.

It is the policy of the United States to work with regional governments toward a comprehensive and lasting resolution to the conflict in northern Uganda and other affected areas by—

(1) providing political, economic, military, and intelligence support for viable multilateral efforts to protect civilians from the Lord's Resistance Army, to apprehend or remove Joseph Kony and his top commanders from the battlefield in the continued absence of a negotiated solution, and to disarm and demobilize the remaining Lord's Resistance Army fighters;

(2) targeting assistance to respond to the humanitarian needs of populations in northeastern Congo, southern Sudan, and Central African Republic currently affected by the activity of the Lord's Resistance Army; and

(3) further supporting and encouraging efforts of the Government of Uganda and civil society to promote comprehensive reconstruction, transitional justice, and reconciliation in northern Uganda as affirmed in the Northern Uganda Crisis Response Act of 2004 (Public Law 108–283) and subsequent resolutions, including Senate Resolution 366, 109th Congress, agreed to February 2, 2006, Senate Resolution 573, 109th Congress, agreed to September 19, 2006, Senate Concurrent Resolution 16, 110th Congress, agreed to in the Senate March 1, 2007, and House Concurrent Resolution 80, 110th Congress, agreed to in the House of Representatives June 18, 2007.