is going to be out there, instead of taking this tactic today that is never going to see the light of day as we go forward?

This Congress could have been spending its time today talking about income disparity, downward pressure on wages, robotics, and what is putting the American worker behind the curve of opportunity; but, no, we can't do that. We spend our time instead on these sorts of arguments.

I hope that we can send this back to committee and come up with something that we can all live with.

Mr. Speaker, I yield back the balance of my time.

Mr. BRADY of Texas. Mr. Speaker, I rise in opposition to the motion.

The SPEAKER pro tempore. The gentleman is recognized for 5 minutes.

Mr. BRADY of Texas. Mr. Speaker, this Democrat proposal does violence to America's research infrastructure. It does violence to America's economy, and it does violence to the future of our economy and to the hope of young people.

We will not stand for this. Vote ''no'' on this motion to recommit.

Mr. Speaker, I yield back the balance of my time.

The SPEAKER pro tempore. Without objection, the previous question is ordered on the motion to recommit.

There was no objection.

The SPEAKER pro tempore. The question is on the motion to recommit.

The question was taken; and the Speaker pro tempore announced that the noes appeared to have it.

Mr. NEAL. Mr. Speaker, on that I demand the yeas and nays.

The yeas and nays were ordered.

The SPEAKER pro tempore. Pursuant to the order of the House of today, further proceedings on this question will be postponed.

AMERICA COMPETES REAUTHORIZATION ACT OF 2015

GENERAL LEAVE

Mr. SMITH of Texas. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative within which to revise and extend their remarks and include extraneous material on the bill, H.R. 1806.

The SPEAKER pro tempore (Mr. DENHAM). Is there objection to the request of the gentleman from Texas?

There was no objection.

The SPEAKER pro tempore. Pursuant to House Resolution 271 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. 1806.

The Chair appoints the gentleman from Kansas (Mr. YODER) to preside over the Committee of the Whole.

□ 1519

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. 1806) to provide for technological innovation through the prioritization of Federal investment in basic research, fundamental scientific discovery, and development to improve the competitiveness of the United States, and for other purposes, with Mr. YODER 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 Texas (Mr. SMITH) and the gentlewoman from Texas (Ms. EDDIE BERNICE JOHNSON) each will control 30 minutes.

The Chair recognizes the gentleman from Texas (Mr. SMITH).

Mr. SMITH of Texas. Mr. Chairman, I yield myself such time as I may consume.

Mr. Chairman, I am pleased to sponsor H.R. 1806, the America COMPETES Reauthorization Act of 2015, a pro-science, fiscally responsible bill that sets America on a path to remain the world's leader in innovation.

This bill reauthorizes civilian research programs at the National Science Foundation, the National Institute of Standards and Technology, the Department of Energy, and the Office of Science and Technology Policy. H.R. 1806 prioritizes basic research and development, while staying within the caps set by the Budget Control Act.

America's businesses rely on government support for basic research to produce the scientific breakthroughs that spur technological innovation, jump-start new industries, and spur economic growth. Title I of the bill reauthorizes the National Science Foundation for 2 years and provides a 4.3 percent increase for research and related activities.

The bill prioritizes funding for the Directorates of Biological Sciences, Computer and Information Science and Engineering, Engineering, and Mathematics and Physical Sciences and recognizes the need to make strategic investments in basic R&D for the U.S. to remain the global leader in science and innovation. The bill reprioritizes research spending at NSF by cutting funding for the Directorate for Social, Behavioral, and Economic Sciences and the Directorate for Geosciences.

Federal budget restraints require all taxpayers' dollars to be spent on high-value science in the national interest. Unfortunately, NSF has funded a number of projects that do not meet the highest standards of scientific merit, from climate change musicals, to evaluating animal photographs in National Geographic, to studying human-set fires in New Zealand in the 1800s. There are dozens of other examples.

The bill ensures accountability by restoring the original intent of the 1950 NSF Act and requiring that all grants serve the ''national interest.'' The NSF has endorsed this goal.

Title II represents the Science, Space, and Technology Committee's commitment to enhancing STEM education programs. A healthy and viable STEM workforce is critical to American industries and ensures our future economic prosperity.

The definition of STEM is expanded to include computer science, which connects all STEM subjects. The bill also creates an advisory panel on STEM education to ensure outside stakeholders have a role in assessing the Federal STEM education portfolio.

Title III includes three bipartisan bills the Science, Space, and Technology Committee approved in March. Those bills, H.R. 1119, the Research and Development Efficiency Act; H.R. 1156, the International Science and Technology Cooperation Act of 2015; and H.R. 1162, the Science Prize Competitions Act, passed the committee by voice vote. Two of these were sponsored by the Democrats.

Title IV supports the important measurement, standards, and technology work taking place at the National Institute of Standards and Technology laboratories, the Manufacturing Extension Partnership program, and the recently authorized Network for Manufacturing Innovation.

Measurement science conducted at NIST contributes to industrial competitiveness by supporting the technical infrastructure and advancements for nanotechnology, global positioning systems, material sciences, cybersecurity, health information technology, and a variety of other fields.

Title V reauthorizes the Department of Energy Office of Science for 2 years, at a 5.4 percent increase over fiscal year 2015. It prioritizes basic research that enables researchers in all 50 States to have access to world-class user facilities, including supercomputers and high-intensity light sources.

This bill also prevents duplication and requires DOE to certify that its climate science work is unique and not being undertaken by another Federal agency.

Title VI reauthorizes the DOE applied research and development programs and activities for fiscal year 2016 and 2017. They include the Office of Electricity Delivery and Energy Reliability, the Office of Nuclear Energy, the Office of Energy Efficiency and Renewable Energy, the Office of Fossil Energy, and the Advanced Research Projects Agency-Energy.

H.R. 1806 refocuses some spending on late-stage commercialization efforts within the Office of Energy Efficiency and Renewable Energy to research and development efforts.

The bill requires DOE to provide a regular strategic analysis of science and technology activities within the Department, identifying key areas for collaboration across science and applied research programs.

Title VII proposes to cut red tape and bureaucracy in the DOE technology transfer process. It allows contractor-operators at DOE national laboratories to work with the private sector more efficiently by delegating signature authority to the directors of the labs

themselves, rather than to DOE contracting officers, for cooperative agreements valued at less than $1 million.

This title also requires DOE to assess its capability to authorize, host, and oversee privately funded fusion research and the next generation fission reactor prototypes. Currently, the private sector has little incentive to build reactor prototypes due to regulatory uncertainty from the Nuclear Regulatory Commission.

In summary, Mr. Chairman, H.R. 1806 sets the right priorities for Federal civilian research, which enhances innovation and U.S. competitiveness without adding to the Federal deficit and debt.

I encourage my colleagues to support this bill.

I reserve the balance of my time.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I yield myself such time as I may consume.

Today, I must unfortunately rise in opposition to the America COMPETES Reauthorization Act. It is unfortunate because I was a strong supporter of both the original COMPETES Act, as well as the 2010 reauthorization.

Both of those bills passed with bipartisan support, and both bills reflected the recommendations of the National Academy of Sciences' groundbreaking 2005 report, ''Rising Above the Gathering Storm.''

It is worth reflecting on what the National Academy's panel found and why they made the recommendations they did.

First, the panel that wrote the report was composed of a distinguished group of individuals from industry, academia, and science; and it was headed by the former Lockheed CEO Norm Augustine.

The panel noted that much of America's economic growth and success in the decades following World War II was the direct result of our Nation's sustained investment in research and development. However, they noted that a gathering storm was approaching. America's economic and military competitors around the world had begun to catch up with our Nation's technological lead.

Moreover, research and development budgets in the United States were stagnating. The panel determined that America was sorely in need of a recommitment to research and development in order to maintain our competitive edge.

The Augustine panel gave specific recommendations that we increase R&D spending, revitalize STEM education across the country, and also create and support a new ARPA-E for breakthrough energy research modeled on the renowned DARPA program at the Department of Defense.

The original COMPETES Act implemented these recommendations across the board. Supporting this bill was one of the highlights of my two decades of service here in Congress.

I have highlighted this history because it is important to understand what we are doing here today and why these issues are so important. Since 2010, when we passed the last COMPETES reauthorization, R&D spending in America has begun to stagnate again and, by some measures, even declined.

In the meantime, our economic competitors have doubled down on their investments in research and development. Over the past decade, China has averaged a 23 percent increase in R&D spending each year. Perhaps, not surprisingly, in 2014, China overtook the United States to become the world's largest economic power.

The crisis that the Augustine committee warned us about in 2005 has now arrived.

□ 1530

What is the response of our majority to this crisis? Absolutely nothing. That is what is in H.R. 1806: absolutely nothing.

H.R. 1806 completely abandons the recommendations of the Augustine committee and the original COMPETES Act. It abandons the legacy of COMPETES by flat-funding R&D investments. It abandons the legacy by slashing funding for the very ARPA-E program envisioned by this committee, the Augustine committee. It abandons that legacy by politicizing the scientific grant-making process and pitting different research disciplines against each other.

I want to be clear about what it is that this majority is abandoning. They are abandoning our future.

America is the greatest nation on Earth, but our greatness is not guaranteed. We have to work for it. We have to do the things that are necessary to ensure a bright future for our country. That means making the same kinds of investments in science and technology that previous generations made. Our predecessors understood what was at stake. They made a commitment to invest in research and development and science education, and we still benefit from those past investments today.

The world is not standing still. If we do not recommit to our investments in science education, research, and development, we will be surpassed.

The bill before us fails to secure our Nation's future, and for that reason, I must strenuously oppose it.

I am not alone in my opposition. We have received more than 40 letters or statements of concern or outright opposition from over 70 different groups, including the American Association for the Advancement of Science, the Association of American Universities, the Association of Public and Land-grant Universities, the Business Council for Sustainable Energy, the Coalition for National Science Funding, the STEM Education Coalition, the Truman National Security Project, and many, many others. I will put the full list of these organizations in the RECORD at this time.

75 ORGANIZATIONS IN OPPOSITION TO H.R. 1806, THE AMERICA COMPETES REAUTHORIZATION ACT OF 2015

1. Alliance to Save Energy
2. American Academy of Political and Social Science
3. American Anthropological Association
4. American Association for the Advancement of Science
5. American Association of Petroleum Geologists
6. American Association of Physics Teachers
7. American Educational Research Association
8. American Geophysical Union
9. American Geosciences Institute
10. American Institute of Biological Sciences
11. American Institute of Physics
12. American Meteorological Society
13. American Physical Society
14. American Political Science Association
15. American Psychological Association
16. American Society for Microbiology
17. American Sociological Association
18. Association for Behavioral and Cognitive Therapies
19. Association for the Sciences of Limnology and Oceanography
20. Association of American Universities
21. Association of Population Centers
22. Association of Public and Land-grant Universities
23. AVS: Science & Technology of Materials, Interfaces, and Processing
24. Biophysical Society
25. Business Council for Sustainable Energy
26. Center for Small Business and the Environment
27. Clay Minerals Society
28. Coalition for National Science Funding
29. Computing Research Association
30. Consortium for Ocean Leadership
31. Consortium of Social Science Associations
32. Council of Undergraduate Research
33. Department of Energy Secretary Ernest Moniz
34. Earth Day Network
35. Ecological Society of America
36. Energy Sciences Coalition
37. Environment America
38. Environment and Energy Study Institute
39. Environmental Defense Fund
40. Federation of American Societies for Experimental Biology
41. Federation of Associations in Behavioral and Brain Sciences
42. Geological Society of America
43. Incorporated Institutions for Seismology
44. Institute of Electrical and Electronics Engineers, Inc.
45. Law and Society Association
46. League of Conservation Voters
47. Learning and Education Academic Research Network
48. Michigan State University
49. National Association of Geoscience Teachers
50. National Association of Marine Laboratories
51. National Cave and Karst Research Institute
52. National Ground Water Association
53. Natural Resources Defense Council
54. Nobel Laureates
55. Ohio State University
56. Paleontological Research Institution
57. Pew
58. Population Association of America
59. Princeton University
60. Research!America
61. Seismological Society of America

62. Sierra Club
63. Society for Mining, Metallurgy, and Exploration, Inc.
64. Society of Independent Professional Earth Scientists
65. Soil Science Society of America
66. STEM Education Coalition
67. Taskforce on American Innovation
68. The Optical Society
69. Truman National Security Project—Operation Free
70. Union of Concerned Scientists
71. United States Permafrost Association
72. University Corporation for Atmospheric Research
73. University of Colorado at Boulder
74. University of Michigan
75. Wayne State University.

Ms. EDDIE BERNICE JOHNSON of Texas. Again, I strongly, strongly oppose this bill, and I reserve the balance of my time.

Mr. SMITH of Texas. Mr. Chairman, I yield 4 minutes to the gentleman from Texas (Mr. WEBER), who is the chairman of the Energy Subcommittee of the Science, Space, and Technology Committee.

Mr. WEBER of Texas. I thank Chairman SMITH for yielding me time to speak on this important legislation that is on the floor today.

Mr. Chair, H.R. 1806, the America COMPETES Reauthorization Act of 2015, authorizes the science and energy research programs at the Department of Energy, providing funding for research and development conducted in our universities and national labs across the country.

DOE is the largest Federal supporter of basic research in the physical sciences and provides user facilities for over 31,000 scientific researchers each year.

The America COMPETES Act prioritizes funding for the Office of Science, which conducts critical research in high energy physics, advanced scientific computing, biological and environmental research, nuclear physics, fusion energy sciences, and basic energy sciences.

This basic R&D has broad applications for our economy and for our national security, providing tools and user facilities for researchers in all energy fields.

The America COMPETES Act also reauthorizes the Department's applied energy programs in nuclear energy, fossil energy, energy efficiency and renewable energy, and electricity research and development.

By prioritizing research and development in these programs, we can maximize Federal dollars and leave commercialization and deployment to the private sector, Mr. Chairman, which has the most incentive to bring new, cost-effective, and efficient technologies to market.

This legislation is fiscally responsible and cuts funding to lower-priority and duplicative programs like EERE, which has grown by almost 60 percent in the last decade. With our national debt of $18 trillion and rising, Congress must prioritize fundamental research to lay the foundation for the next technological breakthrough.

We simply cannot afford to spend limited Federal dollars on promoting today's technology. This is so yesterday when we do that. Instead of duplicating work that could be done in the private sector, the America COMPETES Act prioritizes basic research and development with broad application to all forms of energy and energy efficiencies.

Mr. Chairman, over the past 5 months, the Science Committee has held hearings on the Department of Energy research and development for advanced nuclear reactors, high-performance computing, energy efficiency and renewable energy, energy storage, and the Department of Energy budget proposal. With limited time, this Science Committee in this Congress has conducted five hearings in support of this legislation, prioritizing oversight of the DOE programs authorized in this bill.

By supporting the America COMPETES Act, Congress can promote fundamental research, build a foundation for the private sector to bring innovative new technologies to market, and grow the American economy.

I urge my colleagues to support the America COMPETES Reauthorization Act.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I now yield 3 minutes to the gentlewoman from Maryland (Ms. EDWARDS).

Ms. EDWARDS. Mr. Chairman, it is actually quite disappointing that we are here at this point today. And I join the ranking member and our colleagues on this side of the aisle in opposing this harmful antiscience bill, H.R. 1806.

When I first came into Congress, I was excited because we were actually working on reauthorizing the COMPETES Act. We were making investments in important research and development and technologies for the 21st century. And we were doing that in a bipartisan fashion based on bipartisan scientific and research-based recommendations. But that is not where we are today.

H.R. 1806 contains severe funding cuts to the Department of Energy, including cutting close to one-third of the budget of the Office of Energy Efficiency and Renewable Energy and half the budget of ARPA–E. In fact, you could argue that this is not an investment in the 21st century at all: it is a throwback bill to the 20th century.

These cuts are going to cripple our Nation's research into high-impact technologies to generate, store, and use energy and will harm our ability to compete successfully with other countries.

The bill also contains many harmful provisions restricting the Department of Energy, such as a provision preventing the results of any Department of Energy-supported fossil fuel energy research and development from being ''used for regulatory assessments or determinations by Federal regulatory authorities.'' That would essentially bar the EPA or the Federal Energy Regulatory Commission from using the most current research results when they set rules to protect our air, our land, and our water.

How unfortunate that this antiscience bill also includes a misguided attempt to impose a level of political review on the National Science Foundation's gold-standard merit review system.

This is the National Science Foundation, not a political organization.

The CHAIR. The time of the gentlewoman has expired.

Ms. EDDIE BERNICE JOHNSON of Texas. I yield the gentlewoman an additional 1 minute.

Ms. EDWARDS. This is a dangerous proposal that would stifle the kind of high-risk, outside-the-box thinking that has put the United States on the cutting edge of scientific research.

If this bill were to become law, it would eliminate valuable and scientifically sound research on climate change within the Department of Energy under the guise of a cost-cutting measure.

After all, Mr. Chairman, isn't that what this is about? It is about the other side just not believing in climate change, despite the science.

In addition to all of the dangerous and harmful things that this bill does do, it lacks any substantively helpful provisions in a number of areas.

I actually proposed an amendment that would simply look at our 21st century workforce by supporting research at minority-serving institutions, growing STEM fields for young people who we know have to go into the 21st century workforce. It flat-funds the education directorate at the National Science Foundation.

I can't think of anything more harmful than doing a COMPETES legislation that is, at its core, the most anticompetitive legislation that could be put on this floor. It is a danger to the 21st century.

Mr. SMITH of Texas. Mr. Chairman, I am pleased to yield 2 minutes to the gentleman from Louisiana (Mr. SCALISE), who is the majority whip.

Mr. SCALISE. I thank my colleague, the chairman from Texas, for yielding and for his leadership in bringing the America COMPETES Act to the floor.

Mr. Chairman, I rise in strong support of the America COMPETES Act. If you look at what we are trying to do here, we want America to maintain our competitive edge, to create good-paying jobs here at home. But to do that, we need to invest wisely and responsibly in basic scientific research.

After years of overspending and the administration expanding programs way beyond the core missions of the National Science Foundation and the Department of Energy, the COMPETES Act prioritizes taxpayer dollars to support basic research in biology, chemistry, math, engineering, and computer science. American taxpayers' dollars are being spent on programs that do

not meet the national interest or help invest in our future.

I want to point out some of the wasteful spending that is being eliminated by this legislation, the America COMPETES Act.

Mr. Chairman, $340,000 of taxpayer money is being spent to study human-set fires in New Zealand in the 1800s—taxpayer dollars here in America are being spent on that; $50,000 to study civil lawsuits in Peru from 1600 to 1700; $487,000 to study textiles and gender in Iceland from 874–1800, during the Viking era; $697,000 for ''The Great Immensity,'' a musical about climate change.

This is what taxpayer dollars are being spent on, Mr. Chairman, at a time when Americans are tightening their belts and are looking to Washington to do what they are doing in being fiscally responsible.

This refocuses what we are supposed to be trying to do to promote science, to promote computer science, as a computer scientist, the things that are going to help American workers be successful—not all of this foolishness that is wasting taxpayer money. It is a great bill that actually prioritizes the taxpayer dollars of this country. I urge my colleagues to pass it.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I yield 3 minutes to the gentleman from Maryland (Mr. HOYER).

Mr. HOYER. I thank the gentlewoman for yielding.

Mr. Chairman, I rise in opposition to the COMPETES Reauthorization Act, which is an attempt to disinvest, in my view, in research, innovation, and education at a time when we ought to be investing in those areas even more greatly.

This bill places our competitiveness at a serious risk over the long term. The public must be awfully confused, I understand, by both sides claiming that they are enhancing research. Many interest groups, however, disagree with our Republican friends.

I had hoped that this year's COMPETES legislation would have been written so that we could continue the tradition of the strong bipartisan support that it received in 2007 and 2010. Overwhelmingly, Republicans voted for these bills initially and the reauthorization.

Unfortunately, the severe cuts and partisan policy changes it makes preclude that from happening. The Republicans who wrote this legislation have decided that they know better than America's scientists and innovators. They arbitrarily pick and choose research programs they like at the expense of those they ideologically oppose—in other words, not peer review but political review. And they cut key areas of research far below the levels appropriated for fiscal year 2015, including the Manufacturing Extension Partnership program and R&D for renewable energy technologies.

How ironic that we have an R&D bill on the floor and they are cutting R&D technology here.

Furthermore, this bill would slash our investments in the cutting edge ARPA-E program by 50 percent, which funds high-risk and high-reward research in energy technologies that might not otherwise be pursued.

Now, of course, if global warming is not an issue, who cares.

This bill, though called the America COMPETES Act, really ought to be titled the Everyone Else Competes Act because it will cause us to fall farther and farther behind our overseas competitors, who are already far outpacing us in how much they invest in science and technology research.

Alongside this bill today, the House also is considering a bill that tries to do something many of us agree ought to be done but it does it in a fiscally irresponsible way. I am opposing and urge my colleagues to oppose making the R&D tax credit permanent because we ought to pay for it, Mr. Chairman—not make our children and grandchildren pay for it.

Over and over and over again, the Republicans claim that the tax cuts that they are passing will pay for themselves. I came here in 1981. That was the claim. Under President Reagan, we increased the debt 189 percent.

The CHAIR. The time of the gentleman has expired.

Ms. EDDIE BERNICE JOHNSON of Texas. I yield the gentleman from Maryland an additional 1 minute.

□ 1545

Mr. HOYER. Now, Bush did better after 2001 and 2003. He only increased the deficit 87 percent, or almost three times that increased under President Clinton; and none of the tax cuts ended up paying for themselves, and Greenspan said so.

Since the beginning of this Congress, Republicans have brought to the floor and passed nine tax cuts. It is so easy to vote for tax cuts. It is so hard to pay for what we are buying. And that is why we have a deficit, because we do not pay for what we buy.

Today the House is being asked to vote on another unpaid-for tax extender that, on its own, would increase the deficit by $182 billion. That is a total of $586 billion—over half a trillion dollars—that Republicans are proposing to add to the deficit this year.

We have heard Republicans argue that making the R&D tax credit permanent would benefit the economy.

The CHAIR. The time of the gentleman has again expired.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I yield the gentleman an additional 1 minute.

Mr. HOYER. They are right about that, and I support the R&D being made permanent—if we pay for it. That is a principle the American public expects us to pursue. Many Democrats agree as well.

However, what will be an even greater benefit to the economy is for Congress to set aside the misguided mantra that tax cuts pay for themselves and, instead, put America's fiscal house in order. Let's start a real conversation about fixing our broken Tax Code in a fiscally sustainable way. Passing this R&D tax credit will undermine that effort.

I am urging my colleagues on both sides of the aisle who care deeply about fiscal sustainability, about tax reform, and about economic competitiveness to oppose these bills.

Mr. SMITH of Texas. Mr. Chairman, I yield 2 minutes to the gentleman from California (Mr. KNIGHT), an active member of the Science, Space, and Technology Committee.

Mr. KNIGHT. Mr. Chairman, I rise in support of the America COMPETES Act, and I would like to thank the chair for his leadership in this field.

Mr. Chairman, today the Federal Government spends about $3 billion across STEM education efforts. This bill creates a new STEM education advisory panel to provide feedback and advise the President and Federal agencies with STEM programs to better inform plans and budgets. The bill directs that STEM education efforts are to be coordinated across the Federal Government to limit duplication. Industry also recognizes the benefits of STEM. This is evidenced by its support of various STEM programs with equipment, facilities, and volunteers.

In my district alone, aerospace thrives with high-technical, high-paying jobs. Without STEM, without reaching out with STEM education, we don't get those folks to jump in there. We have to talk about other things like visas and bringing people in for these types of jobs instead of working with our kids to get them educated and moving toward a good career.

This bill provides for grants for research on STEM programming that engages underrepresented students. Again, in my district, we have the Lancaster Robotics Team. It started more than 10 years ago. When it started, it was about 2 percent women, or 2 percent girls; today it is over 40 percent. Forty percent of the Lancaster Robotics Team is girls working towards a STEM degree, working towards an engineering degree, a mathematics degree, and a computer science degree. Again, aerospace brings many of the highest paying and most technical jobs not just to my district, but to this country.

Mr. Chairman, STEM education is not just a buzzword; it is something that actually works. STEM education is the lifeblood for what we do in a high technical society. If we don't do it, someone else will. We should do it right here in America. I ask for an ''aye'' vote.

Ms. EDDIE BERNICE JOHNSON of Texas. I yield 4 minutes to the gentleman from New York (Mr. TONKO).

Mr. TONKO. I thank the gentlewoman from Texas for yielding.

Mr. Chair, I rise today in opposition to H.R. 1806, the America COMPETES Reauthorization Act. The original

COMPETES Act was visionary in its commitment to increased R&D funding, and I strongly believe we should continue to increase funding for worthwhile investments in our Nation's future. However, I have serious concerns with this bill that the majority has offered.

In 2010, as a member of the Science, Space, and Technology Committee, I had the opportunity to work on a truly bipartisan reauthorization of COMPETES. We worked together and chose to make certain that we innovate and we made certain that we would compete.

This year I returned to the Science, Space, and Technology Committee, excited to again work on a smart and targeted COMPETES reauthorization. Unfortunately, there was no bipartisan process, and the result is a bill that does not live up to the original COMPETES vision. It would be more appropriately named the ''America Concedes'' bill. Why? Because at a time when the rest of the world is taking extraordinary steps to innovate, this bill would have America do the opposite. Its efforts are misguided, at the least. Major areas of research are not adequately funded, and the policy changes would take us in the wrong direction.

Mr. Chair, I am concerned by the majority's fixation on allocating funding for NSF by directorate. This creates a dangerous precedent in denying NSF adequate flexibility and instead places political whims ahead of the need to independently foster true innovative research. I am also concerned by the effort to impose political review on NSF's gold-standard merit review system. The scientific community in our Nation and around the world agrees that NSF's review system works, and works very well. So why would we make it more difficult to encourage high risk, high rewards research?

Instead, we should be increasing research funding, providing NSF the appropriate flexibility to fund innovative research, and we should be investing in a sustained commitment to STEM education. My district needs and deserves STEM as an education process. It doesn't want simple buzzwords. It wants a real STEM education effort.

As a nation, we are woefully underproducing scientists and engineers. In order to remain a competitive global economic power in the 21st century, we must place a strong focus on STEM education. Instead, this bill provides flat funding for STEM education along with increased administrative burdens. That is not a commitment to STEM education. In practical terms, it is a decrease in funding.

I am also concerned by the cuts in funding for the Manufacturing Extension Partnership program and by the strike in funding for the National Network for Manufacturing Innovation, or NNMI. These initiatives are smart investments and opportunities for our Nation to truly collaborate, to compete, and to be truly cutting-edge. This bill denies our American pioneer spirit.

The CHAIR. The time of the gentleman has expired.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I yield the gentleman an additional 1 minute.

Mr. TONKO. This bill also makes huge cuts to funding for Energy Efficiency and Renewable Energy research and development as well as the funding for ARPA-E. These cuts ignore the reality that a modern society needs energy, and the only way we are going to meet our energy challenge is through smart investments in research and development.

Energy is essential to our economy, and if we pull back resources and do not invest, we will put our economic and national security at risk. We will also not meet the energy challenge if we blindly ignore existing research and refuse to access the most up-to-date information.

We also cannot solve our budget deficit with these types of cuts. In fact, they are more likely to make the problem worse. The best way to reduce our budget deficit is by fostering new businesses and industries that generate economic wealth, revenue, and jobs, and the fuel for that task is research and development. We are missing a golden opportunity with this measure. For these reasons I urge a ''no'' vote on this bill.

Mr. SMITH of Texas. Mr. Chairman, this bill does not touch merit review.

Mr. Chairman, I yield 2 minutes to the gentleman from Texas (Mr. BABIN), who is a valuable member of the Science, Space, and Technology Committee.

Mr. BABIN. Mr. Chairman, I rise today in strong support of H.R. 1806, the America COMPETES Act.

Mr. Chairman, when the American people pay their taxes, they expect their tax dollars to be spent effectively and efficiently. Too often that has not been the case across government, and there is nothing worse than seeing taxes taken out of their paychecks and wasted. Not only is that fiscally irresponsible, it is insulting to the taxpayers.

The bill before us is fiscally responsible and takes important steps to cut wasteful spending. Traditionally, when the National Science Foundation was mentioned, Americans thought of hard sciences—basic research, advanced technologies in biology, engineering, mathematics, and the physical sciences. It is investments in these fields that advance American technology and help the United States maintain its competitive edge.

Unfortunately, some recent National Science Foundation expenditures have brought widespread criticism to the NSF and its priorities. There was the expenditure, for example, of $856,000 on a grant to teach three captive mountain lions how to use a treadmill. NSF spent another $387,000 on a mechanical device that simulates Swedish massages for rabbits. This is unquestionably a waste of taxpayer money, particularly when we are over $18 trillion in debt.

Our bill cuts spending on lower priority government social and behavioral programs at the National Science Foundation by 45 percent, saving taxpayer dollars and setting a higher priority on the harder sciences. The American people want Washington to be responsible with their money, and when Federal agencies get out of hand, they need to be reined in, and our bill does just that.

I want to thank Chairman SMITH and his staff for their hard work and leadership on this bill, and I ask my colleagues to join me in supporting it.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I yield 3 minutes to the gentlewoman from Massachusetts (Ms. CLARK).

Ms. CLARK of Massachusetts. Mr. Chairman, I thank the gentlewoman from Texas for yielding.

Bentley University is a renowned business school in my district, and when a class from Bentley visited me just a few weeks ago, they were advocating for a critical underpinning of our economy. These students came to discuss the importance of funding the geosciences in the NSF. Why? Because it is good business.

These students and the business community understand the critical role that geoscience has in disaster resilience, helping us to address drought, looking at solar storms that can cripple our electric grid, impacts on fisheries and ocean health, and in maintaining agriculture and in healthy soil.

Business leaders know that extreme weather like hurricanes, droughts, tornadoes, and landslides result in billions of dollars in damage, and by using what we learn from geoscience, we can identify ways to mitigate these costs and save us money. Business leaders understand this connection, so why doesn't Congress?

Rather than support investment in geoscience research, this legislation specifically targets it for drastic cuts in funding. Climate change is real. Human activity contributes to it, and it is bad for the bottom line. It is irresponsible for us to cut funding for research that helps us understand what is happening and how to address it.

Adequately funding geoscience research is critical to protecting and growing our economy and to the security of the American people. Let's vote for our economy, let's vote for our security, and let's reject this bill.

Mr. SMITH of Texas. Mr. Chairman, I yield myself 30 seconds.

Mr. Chairman, as set forth in the report that accompanied the Science, Space, and Technology Committee approval of the America COMPETES Act, NSF will maintain full funding for research in the hard science areas of geoscience like deep-ocean drilling and geological research to find new energy resources. What our bill does do is reduce funds that have been used by NSF to fund low priorities like a survey of

Norwegian tourism, teaching TV meteorologists about climate change, and creating climate change video games.

Mr. Chairman, I yield 3 minutes to the gentleman from Texas (Mr. MCCAUL), my colleague and the chairman of the Homeland Security Committee.

□ 1600

Mr. MCCAUL. Mr. Chairman, I rise today in support of reauthorization of the America COMPETES Act. In this tough budget environment, I applaud Chairman SMITH and the Science, Space, and Technology Committee for crafting a bill that provides for much-needed investments in scientific research in a fiscally responsible manner. By setting priorities and eliminating duplicative activities, we are actually able to increase funding for new and promising research while keeping overall spending constant.

This bill is designed to secure America's premier status in scientific and technological advancement in several ways. First, it improves our STEM education programs by adding computer sciences to the definition of STEM education, which will allow these programs to be used to train the next generation of high-tech workers and cybersecurity professionals. As our high-tech sector continues to expand in places like my hometown of Austin, it is important to make sure that we are producing enough qualified workers to fill these jobs.

Second, this bill also helps researchers at our national labs commercialize their discoveries by removing bureaucratic obstacles. This will bring innovative new products to market faster, encouraging job creation and private sector investment.

Most importantly, the America COMPETES Reauthorization Act provides a substantial increase in funding for research activities at the National Science Foundation, the National Institute of Standards and Technology, and the Department of Energy. This will allow the scientists at our universities, such as the University of Texas, to advance our understanding of the physical world and provide the foundation for future innovations by business and new entrepreneurs.

I urge strong support of this bill.

Ms. EDDIE BERNICE JOHNSON. Mr. Chairman. I yield 3 minutes to the gentleman from California (Mr. TED LIEU).

Mr. TED LIEU of California. Mr. Chairman, I rise today to oppose the America COMPETES Act in part because it cuts over $62 million of funding to the hard science of studying the effects of climate change.

The effects of climate change are not a partisan issue. We know that our sea levels have risen by over 6.7 inches in the last century, and they have accelerated in the last decade. Rising sea levels affect not just Democratic districts; it also affects Republican districts.

We can measure with precision that we have had, over 20 years, the hottest records in terms of temperatures in recorded history having occurred since 1980. We know that, in 2012, over 19 States broke the hottest records in their States. More extreme weather events and more weather uncertainty affect not just red States and blue States and purple States, it affects all of America. And that is why, last month, former Reagan Secretary of State George Shultz wrote an op-ed in The Washington Post saying: Climate change is happening. We need to take action on it, and we need to ensure our future against climate change. He called it the Reagan way. He said that is what President Reagan would have done.

As you know, this America COMPETES Act, the funding for the hard science of the effects of climate change, was put in place under President Bush in 2007. Just today, our President announced what the U.S. military is saying about climate change.

I served on Active Duty in the United States Air Force. I am now 19 years in with the Reserves. One of the amazing strengths of America is that our military is nonpartisan, nonideological; and our military takes the world as it is, not as they hope it to be. Our military does not live in a fantasy world, and they understand that climate change is happening. They know it is a national security threat. They are telling the American public we need to act on climate change now because we can't have flooding of our bases; we can't have droughts and more severe weather events that cause conflicts in all the parts of the world.

So I ask the American public to trust former Reagan Secretary of State George Shultz, trust President Bush, trust our United States military who are saying climate change is a problem. Keep in mind, our military relies on hard science and technology and all that makes this world possible. So trust our military, and trust everyone who has looked at it. Please reject the America COMPETES Act because we need to deal with climate change. We need to deal with it now.

Mr. SMITH of Texas. Mr. Chairman, I yield 1 minute to the gentleman from Michigan (Mr. MOOLENAAR), who is a member of the Science Committee and also a vice chairman of the Research and Technology Subcommittee.

Mr. MOOLENAAR. Mr. Chairman, the America COMPETES Act is good legislation that will help build a better future for our country. The COMPETES Act expands the definition of STEM education to include computer science.

According to the Bureau of Labor Statistics, for every computer science graduate between 2013 and 2023, there will be two jobs available. That is why programs in my district like Go IT, offered free of charge to middle and high school students, are so important to creating career awareness in computer science and other STEM fields.

This legislation increases government accountability. It requires the National Science Foundation grants meet a national interest standard and to publicly justify why they should receive taxpayer dollars. Requiring government agencies to prioritize the national interest is common sense. It enhances accountability to the American people.

I am proud to be a cosponsor of the America COMPETES Act, and I urge my colleagues to vote ''yes.''

Ms. EDDIE BERNICE JOHNSON. I reserve the balance of my time.

Mr. SMITH of Texas. Mr. Chair, I have no other speakers at this time as well, so I will reserve the balance of my time.

Ms. EDDIE BERNICE JOHNSON. Mr. Chair, I have no further requests for speaking.

I just urge everyone to vote ''no'' on this bill, and I yield back the balance of time.

Mr. SMITH of Texas. Mr. Chairman, I yield myself such time as I may consume.

Our colleagues on the other side of the aisle today would have you believe that the only way you can be pro-science is to spend more taxpayer money than the Budget Control Act allows. That is irresponsible.

If everything is a priority, then nothing is. Real priorities require making real choices.

If synthetic biology research at NSF is a priority, we should stop using the American people's tax dollars to fund reviews of animal photographs in National Geographic magazine. If robotics and batteries are priorities, we should not continue to spend taxpayer dollars on climate change musicals.

H.R. 1806 proves that we can set priorities, make tough choices, and still invest more in breakthrough research and innovation.

I thank the members of the Science Committee who provided valuable input into H.R. 1806, the America COMPETES Reauthorization Act of 2015; and that includes the cosponsors of the bill: Committee Vice Chairman FRANK LUCAS; all of our subcommittee chairs, BARBARA COMSTOCK, RANDY WEBER, BARRY LOUDERMILK, and JIM BRIDENSTINE; as well as Representatives STEVE PALAZZO, RANDY HULTGREN, STEVE KNIGHT, BRIAN BABIN, and JOHN MOOLENAAR.

I urge the adoption of this pro-science, fiscally responsible bill.

Mr. Chairman, I would like to enter into the RECORD an exchange of letters between the Committee on Science, Space, and Technology and the Committees on Education and the Workforce, Oversight and Government Reform, and Energy and Commerce.

HOUSE OF REPRESENTATIVES, COMMITTEE ON EDUCATION AND THE WORKFORCE

Washington, DC, May 4, 2015.

Hon. LAMAR SMITH,

Chairman, Committee on Science, Space, and Technology, House of Representatives, Washington, DC.

DEAR MR. CHAIRMAN: I am writing to confirm our mutual understanding with respect

to H.R. 1806, the America COMPETES Reauthorization Act of 2015. Thank you for consulting with the Committee on Education and the Workforce with regard to H.R. 1806 on those matters within the Committee's jurisdiction.

In the interest of expediting the House's consideration of H.R. 1806, the Committee on Education and the Workforce will forgo further consideration of this bill. However, I do so only with the understanding this procedural route will not be construed to prejudice my Committee's jurisdictional interest and prerogatives on this bill or any other similar legislation and will not be considered as precedent for consideration of matters of jurisdictional interest to my Committee in the future.

I respectfully request your support for the appointment of outside conferees from the Committee on Education and the Workforce should this bill or a similar bill be considered in a conference with the Senate. I also request you include our exchange of letters on this matter in the Committee Report on H.R. 1806 and in the Congressional Record during consideration of this bill on the house Floor. Thank you for your attention to these matters.

Sincerely,

JOHN KLINE,
Chairman.

HOUSE OF REPRESENTATIVES, COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY,
Washington, DC, May 4, 2015.

Hon. JOHN KLINE,
Chairman, Committee on Education and the Workforce, Rayburn House Office Building, Washington, DC.

DEAR MR. CHAIRMAN: Thank you for your letter regarding the Committee on Education and the Workforce's jurisdictional interest in H.R. 1806, the ''America COMPETES Reauthorization Act of 2015,'' and your willingness to forego consideration of H.R. 1806 by your committee.

I agree that the Committee on Education and the Workforce has a valid jurisdictional interest in certain provisions of H.R. 1806, and that the Committee's jurisdiction will not be adversely affected by your decision to forego consideration of H.R. 1806. As you have requested, I will support your request for an appropriate appointment of outside conferees from your Committee in the event of a House-Senate conference on this or similar legislation should such a conference be convened.

Finally, I will include a copy of your letter and this response in the Committee Report and in the Congressional Record during the floor consideration of this bill. Thank you again for your cooperation.

Sincerely,

LAMAR SMITH,
Chairman.

HOUSE OF REPRESENTATIVES, COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM,
Washington, DC, May 4, 2015.

Hon. LAMAR SMITH,
Chairman, Committee on Science, Space, and Technology, Rayburn HOB, Washington, DC.

DEAR MR. CHAIRMAN: I write concerning H.R. 1806, the America COMPETES Reauthorization Act of 2015. As you know, the Committee on Science, Space, and Technology received an original referral and the Committee on Oversight and Government Reform a secondary referral when the bill was introduced on April 15, 2015. I recognize and appreciate your desire to bring this legislation before the House of Representatives in an expeditious manner, and accordingly, the Committee on Oversight and Government Reform will forego action on the bill.

The Committee takes this action with our mutual understanding that by foregoing consideration of H.R. 1806 at this time, we do not waive any jurisdiction over the subject matter contained in this or similar legislation. Further, I request your support for the appointment of conferees from the Committee on Oversight and Government Reform during any House-Senate conference convened on this or related legislation.

Finally, I would ask that a copy of our exchange of letters on this matter be included in the bill report filed by the Committee on Science, Space, and Technology, as well as in the Congressional Record during floor consideration, to memorialize our understanding.

Sincerely,

JASON CHAFFETZ,
Chairman.

HOUSE OF REPRESENTATIVES, COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY,
Washington, DC, May 4, 2015.

Hon. JASON CHAFFETZ,
Chairman, Committee on Oversight and Government Reform, Rayburn House Office Building, Washington, DC.

DEAR MR. CHAIRMAN: Thank you for your letter regarding the Committee on Oversight and Government Reform's jurisdictional interest in H.R. 1806, the ''America COMPETES Reauthorization Act of 2015,'' and your willingness to forego consideration of H.R. 1806 by your committee.

I agree that the Committee on Oversight and Government Reform has a valid jurisdictional interest in certain provisions of H.R. 1806, and that the Committee's jurisdiction will not be adversely affected by your decision to forego consideration of H.R. 1806. As you have requested, I will support your request for an appropriate appointment of outside conferees from your Committee in the event of a House-Senate conference on this or similar legislation should such a conference be convened.

Finally, I will include a copy of your letter and this response in the Committee Report and in the Congressional Record during the floor consideration of this bill. Thank you again for your cooperation.

Sincerely,

LAMAR SMITH,
Chairman,

HOUSE OF REPRESENTATIVES, COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY,
Washington, DC, May 12, 2015.

Hon. FRED UPTON,
Chairman, Committee on Energy and Commerce, Rayburn House Office Building, Washington, DC.

DEAR MR. CHAIRMAN: Thank you for your letter regarding the Committee on Energy and Commerce's jurisdictional interest in H.R. 1806, the ''America COMPETES Reauthorization Act of 2015,'' and your willingness to forego consideration of H.R. 1806 by your committee.

I agree that the Committee on Energy and Commerce has a valid jurisdictional interest in certain provisions of H.R. 1806, and that the Committee's jurisdiction will not be adversely affected by your decision to forego consideration of H.R. 1806. As you have requested, I will support your request for an appropriate appointment of outside conferees from your Committee in the event of a House-Senate conference on this or similar legislation should such a conference be convened.

Finally, I will include a copy of your letter and this response in the Committee Report and in the Congressional Record during the floor consideration of this bill. Thank you again for your cooperation.

Sincerely,

LAMAR SMITH,
Chairman.

HOUSE OF REPRESENTATIVES, COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC, May 11, 2015.

Hon. LAMAR SMITH,
Chairman, Committee on Science, Space, and Technology, Rayburn House Office Building, Washington, DC.

DEAR CHAIRMAN SMITH: I write in regard to H.R. 1806, America COMPETES Reauthorization Act of 2015. As you are aware, the bill was referred to the Committee on Science, Space, and Technology, but the Committee on Energy and Commerce has a jurisdictional interest in the bill. I wanted to notify you that the Committee on Energy and Commerce will forgo requesting a sequential referral on the bill so that it may proceed expeditiously to the House floor for consideration.

This is done with the understanding that the Committee on Energy and Commerce's jurisdictional interests over this and similar legislation are in no way diminished or altered. In addition, the Committee reserves the right to seek conferees on H.R. 1806 and requests your support when such a request is made.

I would appreciate your response confirming this understanding with respect to H.R. 1806 and ask that a copy of our exchange of letters on this matter be included in the Congressional Record during consideration of the bill on the House floor.

Sincerely,

FRED UPTON,
Chairman.

Mr. SMITH of Texas. Mr. Chairman, I yield back the balance of my time.

Mrs. CAPPS. Mr. Chair, I would like to submit for the RECORD my strong opposition to H.R. 1806, the America COMPETES Reauthorization Act of 2015.

This harmful bill undermines key investments in science and innovation, as well as our nation's commitment to world class research, including the research that is taking place in my congressional district on the Central Coast of California.

Specifically, this bill cuts several important programs at NSF, including research and development related to climate science, natural hazards, and renewable energy.

Furthermore, H.R. 1806 cripples support for international research collaborations—an instrumental tool at UC Santa Barbara, which has led to groundbreaking research and produced multiple Nobel Prize winners.

As we move to affirm our nation's leadership in science and technology, we should be working in a bipartisan manner to strengthen our investments in scientific research—not weaken them.

This bill is sadly a step backward for American innovation, and I urge my colleagues to oppose H.R. 1806.

The Acting CHAIR (Mr. POE of Texas). All time for general debate has expired.

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

In lieu of the amendment in the nature of a substitute recommended by the Committee on Science, Space, and Technology, printed in the bill, it shall

be in order to consider as an original bill for the purpose of amendment under the 5-minute rule an amendment in the nature of a substitute consisting of the text of Rules Committee Print 114–15. That amendment in the nature of a substitute shall be considered as read.

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

H.R. 1806

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 2015''.

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

Sec. 1. Short title; table of contents.
Sec. 2. Definitions.

TITLE I—NATIONAL SCIENCE FOUNDATION

Sec. 101. Authorization of appropriations.
Sec. 102. Findings.
Sec. 103. Policy objectives.
Sec. 104. Definitions.
Sec. 105. Accountability and transparency.
Sec. 106. Greater accountability in Federal funding for research.
Sec. 107. Obligation of major research equipment and facilities construction funds.
Sec. 108. Management and oversight of large facilities.
Sec. 109. Whistleblower education.
Sec. 110. Graduate student support.
Sec. 111. Permissible support.
Sec. 112. Expanding STEM opportunities.
Sec. 113. Review of education programs.
Sec. 114. Recompetition of awards.
Sec. 115. Sense of the Congress regarding industry investment in STEM education.
Sec. 116. Misrepresentation of research results.
Sec. 117. Research reproducibility and replication.
Sec. 118. Research grant conditions.
Sec. 119. Computing resources study.
Sec. 120. Scientific breakthrough prizes.
Sec. 121. Rotating personnel.
Sec. 122. Sense of Congress regarding Innovation Corps.
Sec. 123. Brain Research through Advancing Innovative Neurotechnologies Initiative.
Sec. 124. Noyce scholarship program amendments.
Sec. 125. Informal STEM education.
Sec. 126. Experimental Program to Stimulate Competitive Research.

TITLE II—SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS

Sec. 201. Findings; sense of Congress.
Sec. 202. STEM Education Advisory Panel.
Sec. 203. Committee on STEM Education.
Sec. 204. STEM Education Coordinating Office.

TITLE III—OFFICE OF SCIENCE AND TECHNOLOGY POLICY

Sec. 301. Authorization of appropriations.
Sec. 302. Regulatory efficiency.
Sec. 303. Coordination of international science and technology partnerships.
Sec. 304. Alternative research funding models.
Sec. 305. Amendments to prize competitions.
Sec. 306. United States Chief Technology Officer.
Sec. 307. National Research Council study on technology for emergency notifications on university campuses.

TITLE IV—NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

Sec. 401. Authorization of appropriations.
Sec. 402. Standards and conformity assessment.
Sec. 403. Visiting Committee on Advanced Technology.
Sec. 404. Police and security authority.
Sec. 405. Education and outreach.
Sec. 406. Programmatic planning report.
Sec. 407. Assessments by the National Research Council.
Sec. 408. Hollings Manufacturing Extension Partnership.
Sec. 409. Elimination of obsolete reports.
Sec. 410. Modifications to grants and cooperative agreements.
Sec. 411. Information systems standards consultation.
Sec. 412. United States-Israeli cooperation.

TITLE V—DEPARTMENT OF ENERGY SCIENCE

Sec. 501. Mission.
Sec. 502. Basic energy sciences.
Sec. 503. Advanced scientific computing research.
Sec. 504. High energy physics.
Sec. 505. Biological and environmental research.
Sec. 506. Fusion energy.
Sec. 507. Nuclear physics.
Sec. 508. Science laboratories infrastructure program.
Sec. 509. Domestic manufacturing.
Sec. 510. Authorization of appropriations.
Sec. 511. Definitions.

TITLE VI—DEPARTMENT OF ENERGY APPLIED RESEARCH AND DEVELOPMENT

Subtitle A—Crosscutting Research and Development

Sec. 601. Crosscutting research and development.
Sec. 602. Strategic research portfolio analysis and coordination plan.
Sec. 603. Strategy for facilities and infrastructure.

Subtitle B—Electricity Delivery and Energy Reliability Research and Development

Sec. 611. Distributed energy and electric energy systems.
Sec. 612. Electric transmission and distribution research and development.

Subtitle C—Nuclear Energy Research and Development

Sec. 621. Objectives.
Sec. 622. Program objectives study.
Sec. 623. Nuclear energy research and development programs.
Sec. 624. Small modular reactor program.
Sec. 625. Fuel cycle research and development.
Sec. 626. Nuclear energy enabling technologies program.
Sec. 627. Technical standards collaboration.
Sec. 628. Available facilities database.
Sec. 629. Nuclear waste disposal.

Subtitle D—Energy Efficiency and Renewable Energy Research and Development

Sec. 641. Energy efficiency.
Sec. 642. Next Generation Lighting Initiative.
Sec. 643. Building standards.
Sec. 644. Secondary electric vehicle battery use program.
Sec. 645. Network for Manufacturing Innovation Program.
Sec. 646. Advanced Energy Technology Transfer Centers.
Sec. 647. Renewable energy.
Sec. 648. Bioenergy program.
Sec. 649. Concentrating solar power research program.
Sec. 650. Renewable energy in public buildings.

Subtitle E—Fossil Energy Research and Development

Sec. 661. Fossil energy.
Sec. 662. Coal research, development, demonstration, and commercial application programs.
Sec. 663. High efficiency gas turbines research and development.

Subtitle F—Advanced Research Projects Agency–Energy

Sec. 671. ARPA–E amendments.

Subtitle G—Authorization of Appropriations

Sec. 681. Authorization of appropriations.

Subtitle H—Definitions

Sec. 691. Definitions.

TITLE VII—DEPARTMENT OF ENERGY TECHNOLOGY TRANSFER

Subtitle A—In General

Sec. 701. Definitions.
Sec. 702. Savings clause.

Subtitle B—Innovation Management at Department of Energy

Sec. 711. Under Secretary for Science and Energy.
Sec. 712. Technology transfer and transitions assessment.
Sec. 713. Sense of Congress.
Sec. 714. Nuclear energy innovation.

Subtitle C—Cross-Sector Partnerships and Grant Competitiveness

Sec. 721. Agreements for Commercializing Technology pilot program.
Sec. 722. Public-private partnerships for commercialization.
Sec. 723. Inclusion of early-stage technology demonstration in authorized technology transfer activities.
Sec. 724. Funding competitiveness for institutions of higher education and other nonprofit institutions.
Sec. 725. Participation in the Innovation Corps program.

Subtitle D—Assessment of Impact

Sec. 731. Report by Government Accountability Office.

TITLE VIII—SENSE OF CONGRESS

Sec. 801. Sense of Congress.

SEC. 2. DEFINITIONS.

In this Act—

(1) the term ''STEM'' means the subjects of science, technology, engineering, and mathematics;

(2) the term ''STEM education'' means education in the subjects of STEM, including computer science; and

(3) the term ''Committee on STEM Education'' means the Committee on Science, Technology, Engineering, and Mathematics Education established under section 101 of the America COMPETES Reauthorization Act of 2010 (42 U.S.C. 6621).

TITLE I—NATIONAL SCIENCE FOUNDATION

SEC. 101. AUTHORIZATION OF APPROPRIATIONS.

(a) FISCAL YEAR 2016.—

(1) IN GENERAL.—There are authorized to be appropriated to the Foundation $7,597,140,000 for fiscal year 2016.

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

(A) $6,186,300,000 shall be made available to carry out research and related activities, including—

(i) $834,800,000 for the Biological Science Directorate;

(ii) $1,050,000,000 for the Computer and Information Science and Engineering Directorate;

(iii) $1,034,000,000 for the Engineering Directorate;

(iv) $1,200,000,000 for the Geosciences Directorate;

(v) $1,500,000,000 for the Mathematical and Physical Science Directorate;

(vi) $150,000,000 for the Social, Behavioral, and Economics Directorate, of which $50,000,000 shall be for the National Center for Science and Engineering Statistics;

(vii) $38,520,000 for the Office of International Science and Engineering;

(viii) $377,500,000 for Integrative Activities; and

(ix) $1,480,000 for the United States Arctic Commission;

(B) $866,000,000 shall be made available for education and human resources;

(C) $200,310,000 shall be made available for major research equipment and facilities construction;

(D) $325,000,000 shall be made available for agency operations and award management;

(E) $4,370,000 shall be made available for the Office of the National Science Board; and

(F) $15,160,000 shall be made available for the Office of Inspector General.

(b) FISCAL YEAR 2017.—

(1) IN GENERAL.—There are authorized to be appropriated to the Foundation $7,597,140,000 for fiscal year 2017.

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

(A) $6,186,300,000 shall be made available to carry out research and related activities, including—

(i) $834,800,000 for the Biological Science Directorate;

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(iv) $1,200,000,000 for the Geosciences Directorate;

(v) $1,500,000,000 for the Mathematical and Physical Science Directorate;

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(B) $866,000,000 shall be made available for education and human resources;

(C) $200,310,000 shall be made available for major research equipment and facilities construction;

(D) $325,000,000 shall be made available for agency operations and award management;

(E) $4,370,000 shall be made available for the Office of the National Science Board; and

(F) $15,160,000 shall be made available for the Office of Inspector General.

SEC. 102. FINDINGS.

Congress finds the following:

(1) Taxpayer-supported research investments administered by the Foundation should serve the national interest.

(2) The Foundation has made major contributions for more than 60 years to strengthen and sustain the Nation's academic research enterprise.

(3) The economic strength and national security of the United States, and the quality of life of all Americans, are grounded in the Nation's scientific and technological capabilities.

(4) Providing support for basic research is an investment in our Nation's future security and economic prosperity.

(5) Congress applauds the Foundation's recognition that wise stewardship of taxpayer dollars is necessary to maintain and ensure the public's trust for funding of fundamental scientific and engineering research.

(6) Other nations are increasing their public investments in basic research in the physical sciences in order to boost long-term economic growth.

(7) Longstanding United States leadership in supercomputing, genomics, nanoscience, photonics, quantum physics, and other key technological areas is jeopardized if United States investments in basic research in the natural sciences do not keep pace.

(8) Redundant regulations and reporting requirements imposed by Federal agencies on research institutions and researchers increase costs by tens of millions of dollars annually.

(9) The Foundation carries out important functions by supporting basic research in all science and engineering disciplines and in supporting STEM education at all levels.

(10) The research and education activities of the Foundation promote the discovery, integration, dissemination, and application of new knowledge in service to society and prepare future generations of scientists, mathematicians, and engineers who will be necessary to ensure America's leadership in the global marketplace.

(11) Many of the complex problems and challenges facing the Nation increasingly require the collaboration of multiple scientific disciplines. The Foundation should continue to emphasize cross-directorate research collaboration and activities to address these issues and encourage interdisciplinary research.

(12) The Foundation should meet the highest standards of efficiency, transparency, and accountability in its stewardship of public funds.

(13) The Foundation is charged with the responsibilities—

(A) to develop and encourage the pursuit of a national policy for the promotion of basic research and education in the sciences;

(B) to initiate, support, and conduct basic scientific research and to appraise the impact of research on industrial development and the general welfare;

(C) to initiate, support, and conduct scientific research activities in connection with matters relating to the national defense, at the request of the Secretary of Defense;

(D) to award scholarships and graduate fellowships in the sciences;

(E) to foster the interchange of scientific information among scientists and across scientific disciplines;

(F) to evaluate scientific research programs undertaken by agencies of the Federal Government, and to correlate the Foundation's scientific research with that undertaken by individuals and by public and private research groups;

(G) to communicate effectively to American citizens the relevance of public investments in scientific discovery and technological innovation to the Nation's security, prosperity, and welfare; and

(H) to establish such special commissions as the Board considers necessary.

(14) The emerging global economic, scientific, and technical environment challenges long standing assumptions about domestic and international policy, requiring the Foundation to play a more proactive role in sustaining the competitive advantage of the United States through superior research capabilities.

SEC. 103. POLICY OBJECTIVES.

In allocating resources made available under this title, the Foundation shall have the following policy objectives:

(1) To renew and maintain the Nation's international leadership in science and technology by—

(A) increasing the national investment in basic scientific research and increasing interdisciplinary investment in strategic areas vital to the national interest;

(B) balancing the Nation's research portfolio among the life sciences, mathematics, the physical sciences, computer and information science, geosciences, engineering, and social, behavioral, and economic sciences, all of which are important for the continued development of enabling technologies necessary for sustained economic competitiveness;

(C) encouraging investments in potentially transformative scientific research to benefit our Nation and its citizens;

(D) expanding the pool of scientists and engineers in the United States, including among segments of the population that have been historically underrepresented in STEM fields; and

(E) modernizing the Nation's research infrastructure and establishing and maintaining cooperative international relationships with premier research institutions.

(2) To increase overall workforce skills by—

(A) improving the quality of STEM education and tools provided both inside and outside of the classroom, including in kindergarten through grade 12; and

(B) expanding STEM training opportunities at institutions of higher education.

(3) To strengthen innovation by expanding the focus of competitiveness and innovation at the regional and local level.

SEC. 104. DEFINITIONS.

In this title:

(1) BOARD.—The term ''Board'' means the National Science Board.

(2) DIRECTOR.—The term ''Director'' means the Director of the Foundation.

(3) 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).

(4) 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)).

(5) 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.

(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. 105. ACCOUNTABILITY AND TRANSPARENCY.

It is the sense of Congress that—

(1) sustained, predictable Federal funding is essential to United States leadership in science and technology;

(2) building understanding of and confidence in investments in basic research are essential to public support for sustained, predictable Federal funding; and

(3) the Foundation should commit itself fully to transparency and accountability and to clear, consistent public communication regarding the national interest for each Foundation-awarded grant and cooperative agreement.

SEC. 106. GREATER ACCOUNTABILITY IN FEDERAL FUNDING FOR RESEARCH.

(a) STANDARD FOR AWARD OF GRANTS.—The Foundation shall award Federal funding for basic research and education in the sciences through a new research grant or cooperative agreement only if an affirmative determination is made by the Foundation under subsection (b) and written justification relating thereto is published under subsection (c).

(b) DETERMINATION.—A determination referred to in subsection (a) is a justification by the responsible Foundation official as to how the research grant or cooperative agreement promotes the progress of science in the United States, consistent with the Foundation mission as established in the National Science Foundation Act of 1950 (42 U.S.C. 1861 et seq.), and further—

(1) is worthy of Federal funding; and

(2) is in the national interest, as indicated by having the potential to achieve—

(A) increased economic competitiveness in the United States;

(B) advancement of the health and welfare of the American public;

(C) development of an American STEM workforce that is globally competitive;

(D) increased public scientific literacy and public engagement with science and technology in the United States;

(E) increased partnerships between academia and industry in the United States;

(F) support for the national defense of the United States; or

(G) promotion of the progress of science in the United States.

(c) WRITTEN JUSTIFICATION.—Public announcement of each award of Federal funding described in subsection (a) shall include a written justification from the responsible Foundation official as to how a grant or cooperative agreement meets the requirements of subsection (b).

(d) IMPLEMENTATION.—A determination under subsection (b) shall be made after a research grant or cooperative agreement proposal has satisfied the Foundation's reviews for Merit and Broader Impacts. Nothing in this section shall be construed as altering the Foundation's intellectual merit or broader impacts criteria for evaluating grant applications.

SEC. 107. OBLIGATION OF MAJOR RESEARCH EQUIPMENT AND FACILITIES CONSTRUCTION FUNDS.

No funds may be obligated for a fiscal year for a construction project for the Foundation that has not commenced before the date of enactment of this Act until 30 days after the report required with respect to each such fiscal year under section 14(a)(2) of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n–4(a)(2)) is transmitted to the Congress.

SEC. 108. MANAGEMENT AND OVERSIGHT OF LARGE FACILITIES.

(a) LARGE FACILITIES OFFICE.—The Director shall maintain a Large Facilities Office within the Office of the Director. The functions of the Large Facilities Office shall be to support the research directorates in the development, implementation, and assessment of major multi-user research facilities, including by—

(1) serving as the Foundation's primary resource for all policy or process issues related to the development and implementation of major multi-user research facilities;

(2) serving as a Foundation-wide resource on project management, including providing expert assistance on nonscientific and nontechnical aspects of project planning, budgeting, implementation, management, and oversight;

(3) coordinating and collaborating with research directorates to share best management practices and lessons learned from prior projects; and

(4) assessing projects during preconstruction and construction phases for cost and schedule risk.

(b) OVERSIGHT OF LARGE FACILITIES.—The Director shall appoint a senior agency official within the Office of the Director whose primary responsibility is oversight of major multi-user research facilities. The duties of this official shall include—

(1) oversight of the development, construction, and operation of major multi-user research facilities across the Foundation;

(2) in collaboration with the directors of the research directorates and other senior agency officials as appropriate, ensuring that the requirements of section 14(a) of the National Science Foundation Authorization Act of 2002 are satisfied;

(3) serving as a liaison to the National Science Board for approval and oversight of major multi-user research facilities; and

(4) periodically reviewing and updating as necessary Foundation policies and guidelines for the development and construction of major multi-user research facilities.

(c) POLICIES FOR LARGE FACILITY COSTS.—

(1) IN GENERAL.—The Director shall ensure that the Foundation's policies for developing and managing major multi-user research facility construction costs are consistent with the best practices described in the March 2009 Government Accountability Office Report GAO-09-3SP, or any successor report thereto.

(2) REPORT.—Not later than 12 months after the date of enactment of this Act, the Director shall submit to Congress the results of a study and a report reforming the Foundation's policies on financial management of major multi-user research facilities, including a description of any aspects of the policies that diverge from the best practices recommended in Government Accountability Office Report GAO-09-3SP and the Uniform Guidance in 2 C.F.R. Part 200.

(3) MANAGEMENT FEES.—

(A) DEFINITION.—In this paragraph, the term ''management fee'' means a portion of an award made by the Foundation for the purpose of covering ordinary and necessary business expenses necessary to maintain operational stability which are not otherwise allowable under Cost Principles Uniform Guidance in 2 C.F.R. part 200, Subpart E, , or any successor regulation thereto.

(B) LIMITATION.—The Foundation may provide management fees under an award only if the awardee has demonstrated that it has limited or no other financial resources for covering the expenses for which the management fees are sought.

(C) FINANCIAL INFORMATION.—The Foundation shall require award applicants to provide income and financial information covering a period of no less than three prior years (or in the case of an entity established less than three years prior to the entity's application date, the period beginning on the date of establishment and ending on the application date), including cash on hand and net asset information, in support of a request for management fees. The Foundation shall also require awardees to report to the Foundation, within 30 days of receipt, any sources of non-Federal funds received in excess of $50,000 during the award period.

(D) EXPENSE REPORTING.—The Foundation shall require awardees to track and report to the Foundation annually all expenses reimbursed or otherwise paid for with management fee funds, in accordance with Federal accounting practices as established in Government Accountability Office Report GAO-12-331G, or any successor report thereto.

(E) AUDITS.—The Inspector General of the Foundation may audit any Foundation award for compliance with this paragraph.

(F) PROHIBITED USES.—An awardee may not use management fees for—

(i) costs allowable under Cost Principles Uniform Guidance in 2 C.F.R. part 200, Subpart E, or any successor regulation thereto;

(ii) alcoholic beverages;

(iii) tickets to concerts, or sporting and other entertainment events;

(iv) vacation or other travel for nonbusiness purposes;

(v) charitable contributions;

(vi) social or sporting club memberships;

(vii) meals for nonbusiness purposes;

(viii) luxury or personal items;

(ix) lobbying, as described in the Uniform Guidance at 2 C.F.R. 200.450; or

(x) any other purpose the Foundation determines is inappropriate.

(G) REVIEW.—The Foundation shall review management fee usage under each Foundation award on at least an annual basis for compliance with this paragraph and the Foundation's Large Facilities Manual.

(4) REPORT.—Not later than 12 months after the date of enactment of this Act, the Director shall submit to Congress a report describing the Foundation's policies for developing and managing major multi-user research facility construction costs, including a description of any aspects of the policies that diverge from the best practices recommended in Government Accountability Office Report GAO-09-3SP, or any successor report thereto, and the Uniform Guidance in 2 C.F.R. part 200.

SEC. 109. WHISTLEBLOWER EDUCATION.

(a) IN GENERAL.—The Foundation shall be subject to section 4712 of title 41, United States Code.

(b) EDUCATION AND TRAINING.—The Foundation shall provide education and training for Foundation managers and staff on the requirements of such section 4712, and provide information on the law to all grantees, contractors, and employees of such grantees and contractors.

SEC. 110. GRADUATE STUDENT SUPPORT.

(a) SENSE OF CONGRESS.—It is the sense of Congress that the essential elements of the NSF Research Traineeship Program, formerly the Integrative Graduate Education and Research Traineeship program, (or any successor thereto) should be maintained, including—

(1) collaborative research that transcends traditional disciplinary boundaries to solve large and complex research problems of significant scientific and societal importance; and

(2) providing students the opportunity to become leaders in the science and engineering of the future.

(b) MODELS FOR SUPPORT.—The Director shall enter into an agreement with the National Research Council to convene a workshop or roundtable to examine models of Federal support for STEM graduate students, including the Foundation's Graduate Research Fellowship program and comparable fellowship programs at other agencies, traineeship programs, and the research assistant model.

(c) PURPOSE.—The purpose of the workshop or roundtable shall be to compare and evaluate the extent to which each of these models helps to prepare graduate students for diverse careers utilizing STEM degrees, including at diverse types of institutions of higher education, in industry, and at government agencies and research laboratories, and to make recommendations regarding—

(1) how current Federal programs and models, including programs and models at the Foundation, can be improved;

(2) the appropriateness of the current distribution of funding among the different models at the Foundation and across the agencies; and

(3) the appropriateness of creating a new education and training program for graduate students distinct from programs that provide direct financial support, including the grants authorized in section 527 of the America COMPETES Reauthorization Act of 2010 (42 U.S.C. 1862p-15).

(d) CRITERIA.—At a minimum, in comparing programs and models, the workshop or roundtable participants shall consider the capacity of such programs or models to provide students with knowledge and skills—

(1) to become independent, creative, successful researchers;

(2) to participate in large interdisciplinary research projects, including in an international context;

(3) to adhere to the highest standards for research ethics;

(4) to become high-quality teachers utilizing the most currently available evidence-based pedagogy;

(5) in oral and written communication, to both technical and nontechnical audiences;

(6) in innovation, entrepreneurship, and business ethics; and

(7) in program management.

(e) GRADUATE STUDENT INPUT.—The participants in the workshop or roundtable shall include current or recent STEM graduate students.

(f) REPORT.—Not later than 1 year after the date of enactment of this Act, the National Research Council shall submit to Congress a summary report of the findings and recommendations of the workshop or roundtable convened under this section.

SEC. 111. PERMISSIBLE SUPPORT.

A grant made by the Education and Human Resources Directorate to support informal education may be used—

(1) to support the participation of underrepresented students in nonprofit competitions, out-of-school activities, and field experiences related to STEM subjects (such as robotics, science research, invention, mathematics, and technology competitions), including—

(A) the purchase of parts and supplies needed to participate in such competitions; and

(B) incentives and stipends for teachers and instructional leaders who are involved in assisting students and preparing students for such competitions, if such activities fall outside the regular duties and responsibilities of such teachers and instructional leaders; and

(2) to broaden underrepresented secondary school students' access to, and interest in, careers that require academic preparation in STEM subjects.

SEC. 112. EXPANDING STEM OPPORTUNITIES.

(a) IN GENERAL.—Within the Directorate for Education and Human Resources (or any successor thereto), under existing programs targeting broadening participation, the Director shall provide grants on a merit-reviewed, competitive basis for research on programming that engages underrepresented students in grades kindergarten through 8 in STEM.

(b) USE OF FUNDS.—

(1) IN GENERAL.—Grants awarded under this section shall be used for research to advance the engagement of underrepresented students in grades kindergarten through 8 in STEM through the development and implementation of innovative before-school, after-school, out-of-school, or summer activities, including programs (if applicable to the target population) provided in a single-gender environment, that are designed to encourage interest, engagement, and skills development of underrepresented students in STEM. Such research shall be conducted in learning environments that actively provide programming to underrepresented students in grades kindergarten through 8 in STEM.

(2) PERMITTED ACTIVITIES.—Such activities may include—

(A) the development and implementation of programming described in subsection (a) for the purpose of research;

(B) the use of a variety of engagement methods, including cooperative and hands-on learning;

(C) exposure of underrepresented youth to role models in the fields of STEM, including researchers in the National Laboratories, and nearpeer mentors;

(D) training of informal learning educators and youth-serving professionals using evidence-based methods consistent with the target student population being served;

(E) education of students on the relevance and significance of STEM careers, provision of academic advice and assistance, and activities designed to help students make real-world connections to STEM content activities;

(F) the attendance of underrepresented youth at events, competitions, and academic programs to provide content expertise and encourage career exposure in STEM;

(G) activities designed to engage parents of underrepresented youth;

(H) innovative strategies to engage underrepresented youth, such as using leadership skill outcome measures to encourage youth with the confidence to pursue STEM coursework and academic study;

(I) coordination with STEM-rich environments, including other nonprofit, nongovernmental organizations, classroom and out-of-classroom settings, institutions of higher education, vocational facilities, corporations, museums, National Laboratories, or science centers; and

(J) the acquisition of instructional materials or technology-based tools to conduct applicable grant activity.

(c) APPLICATION.—An applicant seeking funding under the section shall submit an application at such time, in such manner, and containing such information as may be required. The application shall include, at a minimum, the following:

(1) A description of the target audience to be served by the program.

(2) A description of the process for recruitment and selection of students, as appropriate.

(3) A description of how such research activity may inform programming that engages underrepresented students in grades kindergarten through 8 in STEM.

(4) A description of how such research activity may inform programming that promotes student academic achievement in STEM.

(5) An evaluation plan that includes, at a minimum, the use of outcome-oriented measures to determine the impact and efficacy of activities being researched.

(d) AWARDS.—In awarding grants under this section, the Director shall give priority to applicants which, for the purpose of grant activity, include or partner with a nonprofit, nongovernmental organization that has extensive experience and expertise in increasing the participation of underrepresented students in STEM.

(e) ACCOUNTABILITY AND DISSEMINATION.—

(1) EVALUATION REQUIRED.—Not later than 5 years after the date of enactment of this Act, the Director shall evaluate the grants provided under this section. In addition to evaluating the effectiveness of the grant activities, such evaluation shall—

(A) use a common set of benchmarks and assessment tools to identify best practices and materials developed or demonstrated by the research; and

(B) to the extent practicable, combine the research resulting from the grant activity with the current research on serving underrepresented students in grades kindergarten through 8.

(2) REPORT ON EVALUATIONS.—Not later than 180 days after the completion of the evaluation under paragraph (1), the Director shall submit to Congress and make widely available to the public a report that includes—

(A) the results of the evaluation; and

(B) any recommendations for administrative and legislative action that could optimize the effectiveness of the program.

(f) COORDINATION.—In carrying out this section, the Director shall consult, cooperate, and coordinate, to enhance program effectiveness and to avoid duplication, with the programs and policies of other relevant Federal agencies.

SEC. 113. REVIEW OF EDUCATION PROGRAMS.

(a) IN GENERAL.—The Director shall review the education programs of the Foundation that are in operation as of the date of enactment of this Act to determine—

(1) whether any of such programs duplicate target groups, services provided, fields of focus, or objectives; and

(2) how those programs are being evaluated and assessed for outcome-oriented effectiveness.

(b) REPORT.—Not later than 1 year after the date of enactment of this Act, and annually thereafter as part of the annual budget submission to Congress, the Director shall complete a report on the review carried out under this section and shall submit the report to the Committee on Science, Space, and Technology and the Committee on Appropriations of the House of Representatives, and to the Committee on Commerce, Science, and Transportation, the Committee on Health, Education, Labor, and Pensions, and the Committee on Appropriations of the Senate, and shall make the report widely available to the public.

SEC. 114. RECOMPETITION OF AWARDS.

(a) FINDINGS.—The Congress finds that—

(1) the merit-reviewed competition of grant and award proposals is a hallmark of the Foundation grant and award making process;

(2) the majority of Foundation-funded multi-user research facilities have transitioned to five-year cooperative agreements, and every five years the program officer responsible for the facility makes a recommendation to the National Science Board as to the renewal, recompetition, or termination of support for the facility; and

(3) requiring the recompetition of expiring awards is based on the conviction that competition is most likely to ensure the effective stewardship of Foundation funds for supporting research and education.

(b) RECOMPETITION.—The Director shall ensure that the system for recompetition of Maintenance and Operations of facilities, equipment and instrumentation is fair, consistent, and transparent and is applied in a manner that renews grants and awards in a timely manner. The Director shall periodically evaluate whether the criteria of the system are being applied in a manner that is transparent, reliable, and valid.

SEC. 115. SENSE OF THE CONGRESS REGARDING INDUSTRY INVESTMENT IN STEM EDUCATION.

It is the sense of Congress that—

(1) in order to bolster the STEM workforce pipeline, many industry sectors are becoming involved in K-12 initiatives and supporting undergraduate and graduate work in STEM subject areas and fields;

(2) partnerships with education providers, STEM focused competitions, and other opportunities have become important aspects of private sector efforts to strengthen the STEM workforce;

(3) understanding the work that private sector organizations are undertaking in STEM fields should inform the Federal Government's role in STEM education; and

(4) successful private sector STEM initiatives, as reflected by measurements of relevant outcomes, should be encouraged and supported by the Foundation.

SEC. 116. MISREPRESENTATION OF RESEARCH RESULTS.

(a) PROHIBITION.—The findings and conclusions of any article authored by a principal investigator receiving a research grant from the Foundation, using the results of the research conducted under the grant, that is published in a peer-reviewed publication, otherwise made publicly available, or incorporated in an application for a research grant or grant extension from the Foundation may not contain any falsification, fabrication, or plagiarism, as established in the Foundation's Research Misconduct regulation (45 C.F.R. 689).

(b) PUBLICATION.—The Director shall make publicly available any finding that research misconduct (as defined in 45 C.F.R. 689) has been committed, including the name of the principal investigator, within 30 days of the final administration action of the Foundation.

SEC. 117. RESEARCH REPRODUCIBILITY AND REPLICATION.

(a) SENSE OF CONGRESS.—It is the sense of Congress that—

(1) the gold standard of good science is the ability of a researcher or research lab to reproduce a published method and finding;

(2) there is growing concern that some published research findings cannot be reproduced or replicated, which can negatively affect the public's trust in science;

(3) there are a complex set of factors affecting reproducibility and replication; and

(4) the increasing interdisciplinary nature and complexity of scientific research may be a contributing factor to issues with research reproducibility and replication.

(b) REPORT.—The Director shall—

(1) not later than 45 days after the date of enactment of this Act, enter into an agreement with the National Research Council to provide, within 18 months after the date of enactment of this Act, a report to assess research and data reproducibility and replicability issues in interdisciplinary research and to make recommendations on how to improve rigor and transparency in scientific research; and

(2) not later than 60 days after receiving the results of the assessment under paragraph (1), submit a report to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on

the findings of the assessment, together with the agreement or disagreement of the Director and Board with each of its findings and recommendations.

SEC. 118. RESEARCH GRANT CONDITIONS.

The Foundation shall establish procedures to ensure that—

(1) a research grant awarded by the Foundation to a principal investigator supports a scope of work not otherwise being directly funded by grants provided by other Federal agencies;

(2) a principal investigator includes in any application for a research grant awarded by the Foundation a list of all Federal research funding received by the principal investigator, as well as any funding that is being requested as of that time;

(3) unpublished research results used to support a grant proposal made to the Foundation do not include any knowing misrepresentations of data;

(4) principal investigators who receive Foundation research grant funding under more than one grant at the same time have sufficient resources to conduct the proposed research under each of those grants appropriately under the terms of the grant; and

(5) barriers to early career and new investigator applicants are addressed, including taking into account the broader accomplishments and potential of the individual investigator in addition to the potential impact of the project.

SEC. 119. COMPUTING RESOURCES STUDY.

Not later than 1 year after the date of enactment of this Act, the Comptroller General shall transmit to the Congress a report detailing the results of a study on the use of scientific computing resources funded by the Foundation at institutions of higher education. Such study shall assess—

(1) efficiencies that can be achieved by using shared scientific computing resources for projects that have similar scientific computing requirements or projects where specialized software solutions could be shared with other practitioners in the scientific community;

(2) efficiencies that can be achieved by using shared hardware that can be cost effectively procured from cloud computing services;

(3) efficiencies that can be achieved by using shared software from an open source repository or platform; and

(4) cost savings that could be achieved by potential sharing of scientific computing resources across all Foundation grants.

SEC. 120. SCIENTIFIC BREAKTHROUGH PRIZES.

The Director shall place a high priority on designing and administering pilot programs for scientific breakthrough prizes, in conjunction with private entities, that are consistent with Office of Science and Technology Policy guidelines. Breakthrough prizes shall center around technological breakthroughs that are of strategic importance to the Nation, and have the capacity to spur new economic growth.

SEC. 121. ROTATING PERSONNEL.

In order to control the costs to the Foundation of individuals employed pursuant to the Intergovernmental Personnel Act of 1970 (42 U.S.C. 4701 note)—

(1) the Foundation shall provide to Congress a written justification and waiver by the Deputy Director in instances in which such an individual is to be paid at a rate that exceeds the maximum rate of pay for the Senior Executive Service, including, if applicable, adjustment for the certified Senior Executive Service Performance Appraisal System;

(2) the Foundation shall provide to Congress a written justification and waiver by the Director in instances in which such an individual is to be paid at a rate that exceeds the annual salary rate of the Vice President of the United States; and

(3) the Foundation shall provide an annual report to Congress on the costs to the Foundation of employing such individuals, including—

(A) the timeliness and completeness of Foundation actions in response to recommendations and findings from the Office of Inspector General related to the employment of such individuals;

(B) actions taken by the Foundation to reduce the cost to the Foundation of the employment of such individuals at pay levels that exceed the threshold described in paragraph (1);

(C) the value to the Foundation of employing individuals pursuant to the Intergovernmental Personnel Act of 1970 (42 U.S.C. 4701 note) whose pay is set below the threshold described in paragraph (1); and

(D) the value to the Foundation of employing individuals who are not permanent employees whose pay requires a justification and waiver under paragraph (1) or (2).

SEC. 122. SENSE OF CONGRESS REGARDING INNOVATION CORPS.

It is the sense of Congress that—

(1) the Foundation's Innovation Corps (I-Corps) was established to foster a national innovation ecosystem by encouraging institutions, scientists, engineers, and entrepreneurs to identify and explore the innovation and commercial potential of Foundation-funded research well beyond the laboratory;

(2) the Foundation's I-Corps includes investment in entrepreneurship and commercialization education, training, and mentoring, ultimately leading to the practical deployment of technologies, products, processes, and services that improve the Nation's competitiveness, promote economic growth, and benefit society; and

(3) by building networks of entrepreneurs, educators, mentors, institutions, and collaborations, and supporting specialized education and training, I-Corps is at the leading edge of a strong, lasting foundation for an American innovation ecosystem.

SEC. 123. BRAIN RESEARCH THROUGH ADVANCING INNOVATIVE NEUROTECHNOLOGIES INITIATIVE.

The Foundation shall support research activities related to the Brain Research through Advancing Innovative Neurotechnologies Initiative. The Foundation is encouraged to work in conjunction with the Interagency Working Group on Neuroscience (IWGN) to determine how to use the data infrastructure of the Foundation and other applicable agencies to help neuroscientists collect, standardize, manage, and analyze the large amounts of data that will result from research attempting to understand how the brain functions.

SEC. 124. NOYCE SCHOLARSHIP PROGRAM AMENDMENTS.

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

(1) in subsection (a)(2)(B), by inserting ''or bachelor's'' after ''master's'';

(2) in subsection (c)—

(A) by striking ''and'' at the end of paragraph (2)(B);

(B) in paragraph (3)—

(i) by inserting ''for teachers with master's degrees in their field'' after ''Teaching Fellowships''; and

(ii) by striking the period at the end of subparagraph (B) and inserting ''; and''; and

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

''(4) in the case of National Science Foundation Master Teaching Fellowships for teachers with bachelor's degrees in their field and working toward a master's degree—

''(A) offering academic courses leading to a master's degree and leadership training to prepare individuals to become master teachers in elementary and secondary schools; and

''(B) offering programs both during and after matriculation in the program for which the fellowship is received to enable fellows to become highly effective mathematics and science teachers, including mentoring, training, induction, and professional development activities, to fulfill the service requirements of this section, including the requirements of subsection (e), and to exchange ideas with others in their fields.'';

(3) in subsection (e), by striking ''subsection (g)'' and inserting ''subsection (h)'';

(4) by redesignating subsections (g) through (i) as subsections (h) through (j), respectively; and

(5) by inserting after subsection (f) the following new subsection:

''(g) SUPPORT FOR MASTER TEACHING FELLOWS WHILE ENROLLED IN A MASTER'S DEGREE PROGRAM.—A National Science Foundation Master Teacher Fellow may receive a maximum of 1 year of fellowship support while enrolled in a master's degree program as described in subsection (c)(4)(A), except that if such fellow is enrolled in a part-time program, such amount shall be prorated according to the length of the program.''.

(b) DEFINITION.—Section 10(i)(5) of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n—1(i)(5)) is amended by inserting ''computer science,'' after ''means a science,''.

SEC. 125. INFORMAL STEM EDUCATION.

(a) GRANTS.—The Director, through the Directorate for Education and Human Resources, shall continue to award competitive, merit-reviewed grants to support—

(1) research and development of innovative out-of-school STEM learning and emerging STEM learning environments in order to improve STEM learning outcomes and engagement in STEM; and

(2) research that advances the field of informal STEM education.

(b) USES OF FUNDS.—Activities supported by grants under this section may encompass a single STEM discipline, multiple STEM disciplines, or integrative STEM initiatives and shall include—

(1) research and development that improves our understanding of learning and engagement in informal environments, including the role of informal environments in broadening participation in STEM; and

(2) design and testing of innovative STEM learning models, programs, and other resources for informal learning environments to improve STEM learning outcomes and increase engagement for K-12 students, K-12 teachers, and the general public, including design and testing of the scalability of models, programs, and other resources.

SEC. 126. EXPERIMENTAL PROGRAM TO STIMULATE COMPETITIVE RESEARCH.

The Foundation shall continue to operate a robust Experimental Program to Stimulate Competitive Research (EPSCoR). The EPSCoR program helps ensure that academic research institutions in more than half the States develop a strong research infrastructure and participate fully in federally funded research activities. The program should be a high priority for the Foundation.

TITLE II—SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS

SEC. 201. FINDINGS; SENSE OF CONGRESS.

(a) FINDINGS.—Congress finds the following:

(1) According to the National Science Board's Science and Engineering Indicators, the science and engineering workforce has shown sustained growth for more than half a century, and workers with science and engineering degrees tend to earn more than comparable workers in other fields.

(2) According to the Program for International Student Assessment 2012 results, America lags behind many other nations in STEM education. American students rank 21st in science and 26th in mathematics.

(3) Junior Achievement USA and ING found a decrease of 25 percent in the percentage of teenage students interested in STEM careers.

(4) According to a 2007 report from the Department of Labor, industries and firms dependent on a strong science and mathematics workforce have launched a variety of programs that target K-12 students and undergraduate and graduate students in STEM fields.

(5) The Federal Government spends nearly $3 billion annually on STEM education related program and activities, but encouraging STEM education activities beyond the scope of the Federal Government, including privately sponsored competitions and programs in our schools, is crucial to the future technical and economic competitiveness of the United States.

(b) SENSE OF CONGRESS.—It is the sense of Congress that—

(1) more effective coordination and adoption of performance measurement based on objective outcomes for federally supported STEM programs is needed;

(2) leveraging private and nonprofit investments in STEM education will be essential to strengthening the Federal STEM portfolio;

(3) strengthening the Federal STEM portfolio may require program consolidations and terminations, but such changes should be based on evidence with stakeholder input;

(4) coordinating STEM programs and activities across the Federal Government in order to limit duplication and engage stakeholders in STEM programs and related activities for which objective outcomes can be measured will bolster results of Federal STEM education programs, improve the return on taxpayers' investments in STEM education programs, and in turn strengthen the United States economy; and

(5) as the Committee on STEM Education implements the 5-year Strategic Plan for Federal STEM education required under section 101(b)(5) of the America COMPETES Reauthorization Act of 2010 (42 U.S.C. 6621(b)(5)), STEM education stakeholders must be engaged and outcome-based evaluation metrics should be considered in the coordination and consolidation efforts for the Federal STEM portfolio.

SEC. 202. STEM EDUCATION ADVISORY PANEL.

(a) ESTABLISHMENT.—The President shall establish or designate a STEM Education Advisory Panel that incorporates key stakeholders from the education and industry sectors. The co-chairs shall be members of the President's Council of Advisors on Science and Technology.

(b) QUALIFICATIONS.—The Advisory Panel established or designated by the President under subsection (a) shall consist primarily of members from academic institutions, nonprofit organizations, and industry and shall include in-school, out-of-school, and informal educational practitioners. Members of the Advisory Panel shall be qualified to provide advice and information on STEM education research, development, training, implementation, interventions, professional development, or workforce needs or concerns. In selecting or designating an Advisory Panel, the President may also seek and give consideration to recommendations from the Congress, industry, the scientific community (including the National Academy of Sciences, scientific professional societies, and academia), State and local governments, and other appropriate organizations.

(c) DUTIES.—The Advisory Panel shall advise the President, the Committee on STEM Education, and the STEM Education Coordinating Office established under section 204 on matters relating to STEM education, and shall each year provide general guidance to every Federal agency with STEM education programs or activities, including in the preparation of requests for appropriations for activities related to STEM education. The Advisory Panel shall also assess and develop recommendations for—

(1) progress made in implementing the STEM education Strategic Plan required under section 101 of the America COMPETES Reauthorization Act of 2010 (42 U.S.C. 6621), and any needs or opportunities to update the strategic plan;

(2) the management, coordination, and implementation of STEM education programs and activities across the Federal Government;

(3) the appropriateness of criteria used by Federal agencies to evaluate the effectiveness of Federal STEM education programs and activities;

(4) ways to leverage private and nonprofit STEM investments and encourage public-private partnerships to strengthen STEM education and help build the STEM workforce pipeline;

(5) ways to incorporate workforce needs into Federal STEM education programs, particularly for specific fields of national interest and areas experiencing high unemployment rates;

(6) ways to better vertically and horizontally integrate Federal STEM programs and activities from pre-K through graduate study and the workforce, and from in-school to out-of-school in order to improve transitions for students moving through the STEM pipeline;

(7) whether societal and workforce concerns are adequately addressed by current Federal STEM education programs and activities;

(8) the extent to which Federal STEM education programs and activities are contributing to recruitment and retention of women and underrepresented students in the STEM education and workforce pipeline; and

(9) ways to encourage geographic diversity in STEM education and the workforce pipeline.

(d) REPORTS.—The Advisory Panel shall report, not less frequently than once every 3 fiscal years, to the President and Congress on its assessments under subsection (c) and its recommendations for ways to improve Federal STEM education programs. The first report under this subsection shall be submitted within 1 year after the date of enactment of this Act.

(e) TRAVEL EXPENSES OF NON-FEDERAL MEMBERS.—Non-Federal members of the Advisory Panel, while attending meetings of the Advisory Panel or while otherwise serving at the request of the head of the Advisory Panel away from their homes or regular places of business, may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5703 of title 5, United States Code, for individuals in the Government serving without pay. Nothing in this subsection shall be construed to prohibit members of the Advisory Panel who are officers or employees of the United States from being allowed travel expenses, including per diem in lieu of subsistence, in accordance with existing law.

SEC. 203. COMMITTEE ON STEM EDUCATION.

Section 101 of the America COMPETES Reauthorization Act of 2010 (42 U.S.C. 6621) is amended—

(1) in the first subsection (b)—

(A) by redesignating paragraphs (3) through (6) as paragraphs (5) through (8), respectively;

(B) by inserting after paragraph (2) the following new paragraphs:

''(3) collaborate with the STEM Education Advisory Panel established under section 202 of the America COMPETES Reauthorization Act of 2015 and other outside stakeholders to ensure the engagement of the STEM education community;

''(4) review evaluation measures used for Federal STEM education programs;''; and

(C) in paragraph (8), as so redesignated by subparagraph (A) of this paragraph, by striking '', periodically update,''; and

(2) in the second subsection (b) and in subsection (c), by striking ''subsection (b)(5)'' and inserting ''subsection (b)(7)''.

SEC. 204. STEM EDUCATION COORDINATING OFFICE.

(a) ESTABLISHMENT.—The Director of the National Science Foundation shall establish within the Directorate for Education and Human Resources a STEM Education Coordinating Office, which shall have a Director and staff that shall include career employees detailed from Federal agencies that fund STEM education programs and activities.

(b) RESPONSIBILITIES.—The STEM Education Coordinating Office shall—

(1) provide technical and administrative support to—

(A) the Committee on STEM Education, especially in its coordination of Federal STEM programs and strategic planning responsibilities;

(B) the Advisory Panel established under section 202; and

(C) Federal agencies with STEM education programs;

(2) periodically update and maintain the inventory of federally sponsored STEM education programs and activities established under section 101(b)(8) of the America COMPETES Reauthorization Act of 2010 (42 U.S.C. 6621); and

(3) provide for dissemination of information on Federal STEM education programs and activities, as appropriate, to stakeholders in academia, industry, nonprofit organizations with expertise in STEM education, State and local educational agencies, and other STEM stakeholders.

(c) REPORT.—The Director of the STEM Education Coordinating Office shall transmit a report annually to Congress not later than 60 days after the submission of the President's budget request. The annual report shall include—

(1) any updates to the inventory required under subsection (b)(2);

(2) a description of all consolidations and terminations of Federal STEM education programs implemented in the previous fiscal year, including an explanation of the reasons for consolidations and terminations;

(3) recommendations for consolidations and terminations of STEM education programs or activities in the upcoming fiscal year;

(4) a description of any significant new STEM Education public-private partnerships; and

(5) description of the progress made in carrying out the strategic plan required under section 101 of the America COMPETES Reauthorization Act of 2010 (42 U.S.C. 6621), including a description of the outcome of any program assessments completed in the previous year.

(d) RESPONSIBILITIES OF NSF.—The Director of the National Science Foundation shall encourage and monitor the efforts of the STEM Education Coordinating Office to ensure that the Coordinating Office is carrying out its responsibilities under subsection (b) appropriately.

TITLE III—OFFICE OF SCIENCE AND TECHNOLOGY POLICY

SEC. 301. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated for the Office of Science and Technology Policy—

(1) $4,550,000 for fiscal year 2016; and

(2) $4,550,000 for fiscal year 2017.

SEC. 302. REGULATORY EFFICIENCY.

(a) SENSE OF CONGRESS.—It is the sense of Congress that—

(1) high and increasing administrative burdens and costs in Federal research administration, particularly in the higher education sector where most federally sponsored research is performed, are eroding funds available to carry out basic scientific research;

(2) progress has been made over the last decade in streamlining the pre-award grant application process through Grants.gov, the Federal Government's website portal;

(3) post-award administrative costs have grown as Federal research agencies have continued to impose agency-unique compliance and reporting requirements on researchers and research institutions;

(4) facilities and administration costs at research universities can exceed 50 percent of the total value of Federal research grants, and it is estimated that nearly 30 percent of the funds invested annually in federally funded research is consumed by paperwork and other administrative processes required by Federal agencies; and

(5) it is a matter of critical importance to American competitiveness that administrative

costs of federally funded research be streamlined so that a higher proportion of taxpayer dollars flow into direct research activities.

(b) IN GENERAL.—The Director of the Office of Science and Technology Policy shall establish a working group under the authority of the National Science and Technology Council, to include the Office of Management and Budget. The working group shall be responsible for reviewing Federal regulations affecting research and research universities and making recommendations on how to—

(1) harmonize, streamline, and eliminate duplicative Federal regulations and reporting requirements;

(2) minimize the regulatory burden on United States institutions of higher education performing federally funded research while maintaining accountability for Federal tax dollars; and

(3) identify and update specific regulations to refocus on performance-based goals rather than on process while still meeting the desired outcome.

(c) STAKEHOLDER INPUT.—In carrying out the responsibilities under subsection (b), the working group shall take into account input and recommendations from non-Federal stakeholders, including federally funded and nonfederally funded researchers, institutions of higher education, scientific disciplinary societies and associations, nonprofit research institutions, industry, including small businesses, federally funded research and development centers, and others with a stake in ensuring effectiveness, efficiency, and accountability in the performance of scientific research.

(d) REPORT.—Not later than 1 year after the date of enactment of this Act, and annually thereafter for 3 years, the Director shall report to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on what steps have been taken to carry out the recommendations of the working group established under subsection (b).

SEC. 303. COORDINATION OF INTERNATIONAL SCIENCE AND TECHNOLOGY PARTNERSHIPS.

(a) ESTABLISHMENT.—The Director of the Office of Science and Technology Policy shall establish a body under the National Science and Technology Council with the responsibility to identify and coordinate international science and technology cooperation that can strengthen the United States science and technology enterprise, improve economic and national security, and support United States foreign policy goals.

(b) NSTC BODY LEADERSHIP.—The body established under subsection (a) shall be co-chaired by senior level officials from the Office of Science and Technology Policy and the Department of State.

(c) RESPONSIBILITIES.—The body established under subsection (a) shall—

(1) plan and coordinate interagency international science and technology cooperative research and training activities and partnerships supported or managed by Federal agencies and work with other National Science and Technology Council committees to help plan and coordinate the international component of national science and technology priorities;

(2) establish Federal priorities and policies for aligning, as appropriate, international science and technology cooperative research and training activities and partnerships supported or managed by Federal agencies with the foreign policy goals of the United States;

(3) identify opportunities for new international science and technology cooperative research and training partnerships that advance both the science and technology and the foreign policy priorities of the United States;

(4) in carrying out paragraph (3), solicit input and recommendations from non-Federal science and technology stakeholders, including universities, scientific and professional societies, industry, and relevant organizations and institutions; and

(5) identify broad issues that influence the ability of United States scientists and engineers to collaborate with foreign counterparts, including barriers to collaboration and access to scientific information.

(d) REPORT TO CONGRESS.—The Director of the Office of Science and Technology Policy shall transmit a report, to be updated every 2 years, to the Committee on Science, Space, and Technology and the Committee on Foreign Affairs of the House of Representatives, and to the Committee on Commerce, Science, and Transportation and the Committee on Foreign Relations of the Senate. The report shall also be made available to the public on the reporting agency's website. The report shall contain a description of—

(1) the priorities and policies established under subsection (c)(2);

(2) the ongoing and new partnerships established since the last update to the report;

(3) the means by which stakeholder input was received, as well as summary views of stakeholder input; and

(4) the issues influencing the ability of United States scientists and engineers to collaborate with foreign counterparts.

(e) ADDITIONAL REPORTS TO CONGRESS.—The Director of the Office of Science and Technology Policy shall transmit, not later than 60 days after the date of enactment of this Act and annually thereafter, to the Committee on Science, Space, and Technology and the Committee on Foreign Affairs of the House of Representatives, and to the Committee on Commerce, Science, and Transportation and the Committee on Foreign Relations of the Senate, a report that lists and describes all foreign travel by Office of Science and Technology Policy staff and detailees. Each report shall specify the dates of each trip, the purpose of the trip, Office of Science and Technology Policy participants on the trip, total Office of Science and Technology Policy costs associated with the trip, and details of all international meetings, including meeting participants and topics addressed.

SEC. 304. ALTERNATIVE RESEARCH FUNDING MODELS.

(a) PILOT PROGRAM AUTHORITY.—The heads of Federal science agencies, in consultation with the Director of the Office of Science and Technology Policy, shall conduct appropriate pilot programs to validate alternative research funding models, including—

(1) scientific breakthrough prize programs that are of strategic importance to the Nation and have the capacity to spur new economic growth; and

(2) novel mechanisms of funding including obtaining non-Federal funds through crowd source funding.

(b) NON-FEDERAL PARTNERS.—A pilot program may be conducted under this section through an agreement, grant, or contractual relationship with a non-Federal entity regarding the design, administration, and funding of the program.

(c) PRIZE COMPETITION JUDGES.—

(1) REQUIREMENTS.—Judges for a prize competition carried out under this section shall not be required to be Federal employees. An individual who serves as a judge for a prize competition carried out under this section who is not a Federal employee shall be required to sign an agreement, developed by the Office of Science and Technology Policy, with respect to nondisclosure, conflict of interest, and judging code of conduct requirements.

(2) DISCLOSURE OF PERSONAL FINANCIAL INTERESTS.—A judge for a prize competition with a total purse of $10,000 or more, or for an aggregate of prize competitions with a total purse of $50,000 or more, shall be required to disclose all personal financial interests.

(3) REPORT TO CONGRESS.—Not later than 30 days after the Office of Science and Technology Policy completes development of an agreement under paragraph (1), it shall transmit a report to Congress describing the requirements of such agreement.

(d) PUBLIC NOTICE.—The heads of Federal science agencies shall widely advertise prize competitions to be conducted under this section to ensure maximum participation.

(e) DEFINITION.—For purposes of this section, the term ''Federal science agency'' means—

(1) the National Aeronautics and Space Administration;

(2) the National Science Foundation;

(3) the National Institute of Standards and Technology; and

(4) the National Weather Service.

(f) REPORT TO CONGRESS.—Not later than 1 year after the date of enactment of this Act, and annually thereafter as part of the annual budget submission to Congress, the Director of the Office of Science and Technology Policy shall transmit to the Congress a report on programs identified and conducted under subsection (a).

SEC. 305. AMENDMENTS TO PRIZE COMPETITIONS.

Section 24 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3719) is amended—

(1) in subsection (c)—

(A) by inserting ''competition'' after ''section, a prize'';

(B) by inserting ''types'' after ''following''; and

(C) in paragraph (4), by striking ''prizes'' and inserting ''prize competitions'';

(2) in subsection (f)—

(A) by striking ''in the Federal Register'' and inserting ''on a publicly accessible Government website, such as www.challenge.gov,''; and

(B) in paragraph (4), by striking ''prize'' and inserting ''cash prize purse'';

(3) in subsection (g), by striking ''prize'' and inserting ''cash prize purse'';

(4) in subsection (h), by inserting ''prize'' before ''competition'' both places it appears;

(5) in subsection (i)—

(A) in paragraph (1)(B), by inserting ''prize'' before ''competition'';

(B) in paragraph (2)(A), by inserting ''prize'' before ''competition'' both places it appears;

(C) by redesignating paragraph (3) as paragraph (4); and

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

''(3) WAIVER.—An agency may waive the requirement under paragraph (2). The annual report under subsection (p) shall include a list of such waivers granted during the preceding fiscal year, along with a detailed explanation of the reasons for granting the waivers.'';

(6) in subsection (k)—

(A) in paragraph (2)(A), by inserting ''prize'' before ''competition''; and

(B) in paragraph (3), by inserting ''prize'' before ''competitions'' both places it appears;

(7) in subsection (l), by striking all after ''may enter into'' and inserting ''a grant, contract, cooperative agreement, or other agreement with a private sector for-profit or nonprofit entity to administer the prize competition, subject to the provisions of this section.'';

(8) in subsection (m)—

(A) by amending paragraph (1) to read as follows:

''(1) IN GENERAL.—Support for a prize competition under this section, including financial support for the design and administration of a prize competition or funds for a cash prize purse, may consist of Federal appropriated funds and funds provided by private sector for-profit and nonprofit entities. The head of an agency may accept funds from other Federal agencies, private sector for-profit entities, and nonprofit entities to support such prize competitions. The head of an agency may not give any special consideration to any private sector for-profit or nonprofit entity in return for a donation.'';

(B) in paragraph (2), by striking ''prize awards'' and inserting ''cash prize purses'';

(C) in paragraph (3)(A)—

(i) by striking ''No prize'' and inserting ''No prize competition''; and

(ii) by striking ''the prize'' and inserting ''the cash prize purse'';

(D) in paragraph (3)(B), by striking ''a prize'' and inserting ''a cash prize purse'';

(E) in paragraph (3)(B)(i), by inserting ''competition'' after ''prize'';

(F) in paragraph (4)(A), by striking ''a prize'' and inserting ''a cash prize purse''; and

(G) in paragraph (4)(B), by striking ''cash prizes'' and inserting ''cash prize purses'';

(9) in subsection (n), by inserting ''for both for-profit and nonprofit entities,'' after ''contract vehicle'';

(10) in subsection (o)(1), by striking ''or providing a prize'' and insert ''a prize competition or providing a cash prize purse''; and

(11) in subsection (p)(2)—

(A) in subparagraph (C), by striking ''cash prizes'' both places it occurs and inserting ''cash prize purses''; and

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

''(G) PLAN.—A description of crosscutting topical areas and agency-specific mission needs that may be the strongest opportunities for prize competitions during the upcoming 2 fiscal years.''.

SEC. 306. UNITED STATES CHIEF TECHNOLOGY OFFICER.

Title II of the National Science and Technology Policy, Organization, and Priorities Act of 1976 (42 U.S.C. 6611 et seq.) is amended by adding at the end the following new section:

''UNITED STATES CHIEF TECHNOLOGY OFFICER

''SEC. 210. (a) APPOINTMENT.—The President may appoint a United States Chief Technology Officer. Not later than 1 year after the date of enactment of the America COMPETES Reauthorization Act of 2015, such officer shall be one of the Associate Directors of the Office of Science and Technology Policy.

''(b) DUTIES.—The duties of the United States Chief Technology Officer should include—

''(1) advising the President and the Director of the Office of Science and Technology Policy on Federal information systems, technology, data, and innovation policies and initiatives;

''(2) promoting an improved exchange of information among the Federal Government, the public, and Congress;

''(3) promoting the use of innovative technological approaches across the Federal Government to ensure a modern information technology infrastructure;

''(4) working with the Chief Technology Officers and Chief Information Officers of all Federal agencies to ensure the use of best technologies and security practices for information systems;

''(5) establishing a working group with such Officers to exchange best practices about information systems;

''(6) promoting transparency and accountability across the Federal Government for all technological implementation by working with agencies to ensure that each arm of the Federal Government, including the executive branch, makes its records open and accessible;

''(7) promoting security and privacy protection policies for all Federal information technology systems that are consistent with Federal law, regulations, and current best practices;

''(8) promoting technological interoperability of key Government functions;

''(9) in consultation with the Office of Management and Budget, providing an annual report to the President, the Director of the Office of Science and Technology Policy, and Congress on the current state of information systems of all Federal agencies, including—

''(A) the status of information systems, including potential technology and security concerns about these information systems in all Federal agencies;

''(B) a review of all Federal websites with third-party embedded tools that—

''(i) identifies each embedded tool, who it belongs to, and the data it collects; and

''(ii) addresses effects on cybersecurity and consumer privacy, including whether each website provides prominent notice to consumers about the presence of the tool and whether the consumer may opt-out of the tool;

''(C) the amount of money being spent on various technologies; and

''(D) technology recommendations and best practices; and

''(10) such other functions and activities as the President and Director of the Office of Science and Technology Policy may assign.

''(c) REPORT.—In the absence of a United States Chief Technology Officer, the Director of the Office of Science and Technology Policy shall be responsible for providing the report required under subsection (b)(9).''.

SEC. 307. NATIONAL RESEARCH COUNCIL STUDY ON TECHNOLOGY FOR EMERGENCY NOTIFICATIONS ON UNIVERSITY CAMPUSES.

(a) IN GENERAL.—Not later than 90 days after the date of enactment of this Act, the Director of the Office of Science and Technology Policy shall enter into an arrangement with the National Research Council to conduct and complete a study to identify and review technologies employed at institutions of higher education to provide notifications to students, faculty, and other personnel during emergency situations in accordance with the requirements of existing law. The study shall address—

(1) the timeliness of notifications during emergency situations provided by various technologies;

(2) the durability of such technologies in delivering such notifications to students, faculty, and other personnel; and

(3) the limitations exhibited by such technologies to successfully deliver notifications not more than 30 seconds after the institution of higher education transmits such notifications.

(b) REPORT REQUIRED.—Not later than 1 year after the date on which the National Research Council enters into the arrangement required by subsection (a), the Director of the Office of Science and Technology Policy shall submit to Congress a report on the study conducted under such subsection.

TITLE IV—NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

SEC. 401. AUTHORIZATION OF APPROPRIATIONS.

(a) FISCAL YEAR 2016.—

(1) IN GENERAL.—There are authorized to be appropriated to the Secretary of Commerce $933,700,000 for the National Institute of Standards and Technology for fiscal year 2016.

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

(A) $744,700,000 shall be for scientific and technical research and services laboratory activities;

(B) $59,000,000 shall be for the construction and maintenance of facilities; and

(C) $130,000,000 shall be for industrial technology services activities, of which $125,000,000 shall be for the Manufacturing Extension Partnership program under sections 25 and 26 of the National Institute of Standards and Technology Act (15 U.S.C. 278k and 278l) and $5,000,000 shall be for the Network for Manufacturing Innovation Program under section 34 of the National Institute of Standards and Technology Act (15 U.S.C. 278s).

(b) FISCAL YEAR 2017.—

(1) IN GENERAL.—There are authorized to be appropriated to the Secretary of Commerce $933,700,000 for the National Institute of Standards and Technology for fiscal year 2017.

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

(A) $744,700,000 shall be for scientific and technical research and services laboratory activities;

(B) $59,000,000 shall be for the construction and maintenance of facilities; and

(C) $130,000,000 shall be for industrial technology services activities, of which $125,000,000 shall be for the Manufacturing Extension Partnership program under sections 25 and 26 of the National Institute of Standards and Technology Act (15 U.S.C. 278k and 278l) and $5,000,000 shall be for the Network for Manufacturing Innovation Program under section 34 of the National Institute of Standards and Technology Act (15 U.S.C. 278s).

SEC. 402. STANDARDS AND CONFORMITY ASSESSMENT.

Section 2 of the National Institute of Standards and Technology Act (15 U.S.C. 272) is amended—

(1) in subsection (b)—

(A) in the matter preceding paragraph (1), by striking ''authorized to take'' and inserting ''authorized to serve as the President's principal adviser on standards policy pertaining to the Nation's technological competitiveness and innovation ability and to take'';

(B) in paragraph (3), by striking ''compare standards'' and all that follows through ''Federal Government'' and inserting ''facilitate standards-related information sharing and cooperation between Federal agencies''; and

(C) in paragraph (13), by striking ''Federal, State, and local'' and all that follows through ''private sector'' and inserting ''technical standards activities and conformity assessment activities of Federal, State, and local governments with private sector''; and

(2) in subsection (c)—

(A) in paragraph (22), by striking ''and'' after the semicolon;

(B) by redesignating paragraph (23) as paragraph (25); and

(C) by inserting after paragraph (22) the following:

''(23) participate in and support scientific and technical conferences;

''(24) perform pre-competitive measurement science and technology research in partnership with institutions of higher education and industry to promote United States industrial competitiveness; and''.

SEC. 403. VISITING COMMITTEE ON ADVANCED TECHNOLOGY.

Section 10 of the National Institute of Standards and Technology Act (15 U.S.C. 278) is amended—

(1) in subsection (a)—

(A) by striking ''15 members'' and inserting ''not fewer than 11 members'';

(B) by striking ''at least 10'' and inserting ''at least two-thirds''; and

(C) by adding at the end the following: ''The Committee may consult with the National Research Council in making recommendations regarding general policy for the Institute.''; and

(2) in subsection (h)(1), by striking '', including the Program established under section 28,''.

SEC. 404. POLICE AND SECURITY AUTHORITY.

Section 15 of the National Institute of Standards and Technology Act (15 U.S.C. 278e) is amended—

(1) by striking ''of the Government; and'' and inserting ''of the Government;''; and

(2) by striking ''United States Code.'' and inserting ''United States Code; and (i) the protection of Institute buildings and other plant facilities, equipment, and property, and of employees, associates, visitors, or other persons located therein or associated therewith, notwithstanding any other provision of law.''.

SEC. 405. EDUCATION AND OUTREACH.

The National Institute of Standards and Technology Act (15 U.S.C. 271 et seq.) is amended by striking sections 18, 19, and 19A and inserting the following:

''SEC. 18. EDUCATION AND OUTREACH.

''(a) IN GENERAL.—The Director may support, promote, and coordinate activities and efforts to enhance public awareness and understanding of

measurement sciences, standards, and technology by the general public, industry, and academia in support of the Institute's mission.

''(b) RESEARCH FELLOWSHIPS.—

''(1) IN GENERAL.—The Director may award research fellowships and other forms of financial and logistical assistance, including direct stipend awards, to—

''(A) students at institutions of higher education within the United States who show promise as present or future contributors to the mission of the Institute; and

''(B) United States citizens for research and technical activities of the Institute.

''(2) SELECTION.—The Director shall select persons to receive such fellowships and assistance on the basis of ability and of the relevance of the proposed work to the mission and programs of the Institute.

''(3) DEFINITION.—For the purposes of this subsection, financial and logistical assistance includes, notwithstanding section 1345 of title 31, United States Code, or any contrary provision of law, temporary housing and local transportation to and from the Institute facilities.

''(c) POST-DOCTORAL FELLOWSHIP PROGRAM.—The Director shall establish and conduct a postdoctoral fellowship program, subject to the availability of appropriations, that shall include not fewer than 20 fellows per fiscal year. In evaluating applications for fellowships under this subsection, the Director shall give consideration to the goal of promoting the participation of underrepresented students in research areas supported by the Institute.''.

SEC. 406. PROGRAMMATIC PLANNING REPORT.

Section 23(d) of the National Institute of Standards and Technology Act (15 U.S.C. 278i(d)) is amended by adding at the end the following: ''The 3-year programmatic planning document shall also describe how the Director is addressing recommendations from the Visiting Committee on Advanced Technology established under section 10.''.

SEC. 407. ASSESSMENTS BY THE NATIONAL RESEARCH COUNCIL.

(a) NATIONAL ACADEMY OF SCIENCES REVIEW.—Not later than 6 months after the date of enactment of this Act, the Director of the National Institute of Standards and Technology shall enter into a contract with the National Academy of Sciences to conduct a single, comprehensive review of the Institute's laboratory programs. The review shall—

(1) assess the technical merits and scientific caliber of the research conducted at the laboratories;

(2) examine the strengths and weaknesses of the 2010 laboratory reorganization on the Institute's ability to fulfill its mission;

(3) evaluate how cross-cutting research and development activities are planned, coordinated, and executed across the laboratories; and

(4) assess how the laboratories are engaging industry, including the incorporation of industry need, into the research goals and objectives of the Institute.

(b) ADDITIONAL ASSESSMENTS.—Section 24 of the National Institute of Standards and Technology Act (15 U.S.C. 278j) is amended to read as follows:

''SEC. 24. ASSESSMENTS BY THE NATIONAL RESEARCH COUNCIL.

''(a) IN GENERAL.—The Institute shall contract with the National Research Council to perform and report on assessments of the technical quality and impact of the work conducted at Institute laboratories.

''(b) SCHEDULE.—Two laboratories shall be assessed under subsection (a) each year, and each laboratory shall be assessed at least once every 3 years.

''(c) SUMMARY REPORT.—Beginning in the year after the first assessment is conducted under subsection (a), and once every two years thereafter, the Institute shall contract with the National Research Council to prepare a report that summarizes the findings common across the individual assessment reports.

''(d) ADDITIONAL ASSESSMENTS.—The Institute, at the discretion of the Director, also may contract with the National Research Council to conduct additional assessments of Institute programs and projects that involve collaboration across the Institute laboratories and centers and assessments of selected scientific and technical topics.

''(e) CONSULTATION WITH VISITING COMMITTEE ON ADVANCED TECHNOLOGY.—The National Research Council may consult with the Visiting Committee on Advanced Technology established under section 10 in performing the assessments under this section.

''(f) REPORTS.—Not later than 30 days after the completion of each assessment, the Institute shall transmit the report on such assessment to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.''.

SEC. 408. HOLLINGS MANUFACTURING EXTENSION PARTNERSHIP.

Section 25 of the National Institute of Standards and Technology Act (15 U.S.C. 278k) is amended to read as follows:

''SEC. 25. HOLLINGS MANUFACTURING EXTENSION PARTNERSHIP.

''(a) ESTABLISHMENT AND PURPOSE.—

''(1) IN GENERAL.—The Secretary, through the Director and, if appropriate, through other officials, shall provide assistance for the creation and support of manufacturing extension centers, to be known as the 'Hollings Manufacturing Extension Centers', for the transfer of manufacturing technology and best business practices (in this Act referred to as the 'Centers'). The program under this section shall be known as the 'Hollings Manufacturing Extension Partnership'.

''(2) AFFILIATIONS.—Such Centers shall be affiliated with any United States-based public or nonprofit institution or organization, or group thereof, that applies for and is awarded financial assistance under this section.

''(3) OBJECTIVE.—The objective of the Centers is to enhance competitiveness, productivity, and technological performance in United States manufacturing through—

''(A) the transfer of manufacturing technology and techniques developed at the Institute to Centers and, through them, to manufacturing companies throughout the United States;

''(B) the participation of individuals from industry, institutions of higher education, State governments, other Federal agencies, and, when appropriate, the Institute in cooperative technology transfer activities;

''(C) efforts to make new manufacturing technology and processes usable by United States-based small and medium-sized companies;

''(D) the active dissemination of scientific, engineering, technical, and management information about manufacturing to industrial firms, including small and medium-sized manufacturing companies;

''(E) the utilization, when appropriate, of the expertise and capability that exists in Federal laboratories other than the Institute;

''(F) the provision to community colleges and area career and technical education schools of information about the job skills needed in small and medium-sized manufacturing businesses in the regions they serve; and

''(G) promoting and expanding certification systems offered through industry, associations, and local colleges, when appropriate.

''(b) ACTIVITIES.—The activities of the Centers shall include—

''(1) the establishment of automated manufacturing systems and other advanced production technologies, based on Institute-supported research, for the purpose of demonstrations and technology transfer;

''(2) the active transfer and dissemination of research findings and Center expertise to a wide range of companies and enterprises, particularly small and medium-sized manufacturers; and

''(3) the facilitation of collaborations and partnerships between small and medium-sized manufacturing companies and community colleges and area career and technical education schools to help such colleges and schools better understand the specific needs of manufacturers and to help manufacturers better understand the skill sets that students learn in the programs offered by such colleges and schools.

''(c) OPERATIONS.—

''(1) FINANCIAL SUPPORT.—The Secretary may provide financial support to any Center created under subsection (a). The Secretary may not provide to a Center more than 50 percent of the capital and annual operating and maintenance funds required to create and maintain such Center.

''(2) REGULATIONS.—The Secretary shall implement, review, and update the sections of the Code of Federal Regulations related to this section at least once every 3 years.

''(3) APPLICATION.—

''(A) IN GENERAL.—Any nonprofit institution, or consortium thereof, or State or local government, may submit to the Secretary an application for financial support under this section, in accordance with the procedures established by the Secretary.

''(B) COST SHARING.—In order to receive assistance under this section, an applicant for financial assistance under subparagraph (A) shall provide adequate assurances that non-Federal assets obtained from the applicant and the applicant's partnering organizations will be used as a funding source to meet not less than 50 percent of the costs incurred. For purposes of the preceding sentence, the costs incurred means the costs incurred in connection with the activities undertaken to improve the competitiveness, management, productivity, and technological performance of small and medium-sized manufacturing companies.

''(C) AGREEMENTS WITH OTHER ENTITIES.—In meeting the 50 percent requirement, it is anticipated that a Center will enter into agreements with other entities such as private industry, institutions of higher education, and State governments to accomplish programmatic objectives and access new and existing resources that will further the impact of the Federal investment made on behalf of small and medium-sized manufacturing companies.

''(D) LEGAL RIGHTS.—Each applicant under subparagraph (A) shall also submit a proposal for the allocation of the legal rights associated with any invention which may result from the proposed Center's activities.

''(4) MERIT REVIEW.—The Secretary shall subject each such application to merit review. In making a decision whether to approve such application and provide financial support under this section, the Secretary shall consider, at a minimum, the following:

''(A) The merits of the application, particularly those portions of the application regarding technology transfer, training and education, and adaptation of manufacturing technologies to the needs of particular industrial sectors.

''(B) The quality of service to be provided.

''(C) Geographical diversity and extent of service area.

''(D) The percentage of funding and amount of in-kind commitment from other sources.

''(5) EVALUATION.—

''(A) IN GENERAL.—Each Center that receives financial assistance under this section shall be evaluated during its third year of operation by an evaluation panel appointed by the Secretary.

''(B) COMPOSITION.—Each such evaluation panel shall be composed of private experts, none of whom shall be connected with the involved Center, and Federal officials.

''(C) CHAIR.—An official of the Institute shall chair the panel.

''(D) PERFORMANCE MEASUREMENT.—Each evaluation panel shall measure the involved

Center's performance against the objectives specified in this section.

''(E) POSITIVE EVALUATION.—If the evaluation is positive, the Secretary may provide continued funding through the sixth year.

''(F) PROBATION.—The Secretary shall not provide funding unless the Center has received a positive evaluation. A Center that has not received a positive evaluation by the evaluation panel shall be notified by the panel of the deficiencies in its performance and shall be placed on probation for one year, after which time the panel shall reevaluate the Center. If the Center has not addressed the deficiencies identified by the panel, or shown a significant improvement in its performance, the Director shall conduct a new competition to select an operator for the Center or may close the Center.

''(G) ADDITIONAL FINANCIAL SUPPORT.—After the sixth year, a Center may receive additional financial support under this section if it has received a positive evaluation through an independent review, under procedures established by the Institute.

''(H) EIGHT-YEAR REVIEW.—A Center shall undergo an independent review in the 8th year of operation. Each evaluation panel shall measure the Center's performance against the objectives specified in this section. A Center that has not received a positive evaluation as a result of an independent review shall be notified by the Program of the deficiencies in its performance and shall be placed on probation for one year, after which time the Program shall reevaluate the Center. If the Center has not addressed the deficiencies identified by the review, or shown a significant improvement in its performance, the Director shall conduct a new competition to select an operator for the Center or may close the Center.

''(I) RECOMPETITION.—If a recipient of a Center award has received financial assistance for 10 consecutive years, the Director shall conduct a new competition to select an operator for the Center consistent with the plan required in this Act. Incumbent Center operators in good standing shall be eligible to compete for the new award.

''(J) REPORTS.—

''(i) PLAN.—Not later than 180 days after the date of enactment of the America COMPETES Reauthorization Act of 2015, the Director shall transmit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a plan as to how the Institute will conduct reviews, assessments, and reapplication competitions under this paragraph.

''(ii) INDEPENDENT ASSESSMENT.—The Director shall contract with an independent organization to perform an assessment of the implementation of the reapplication competition process under this paragraph within 3 years after the transmittal of the report under clause (i). The organization conducting the assessment under this clause may consult with the MEP Advisory Board.

''(iii) COMPARISON OF CENTERS.—Not later than 2 years after the date of enactment of the America COMPETES Reauthorization Act of 2015, the Director shall transmit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report providing information on the first and second years of operations for centers operating from new competitions or recompetition as compared to longstanding centers. The report shall provide detail on the engagement in services provided by Centers and the characteristics of services provided, including volume and type of services, so that the Committees can evaluate whether the cost-sharing ratio has an effect on the services provided at Centers.

''(6) PATENT RIGHTS.—The provisions of chapter 18 of title 35, United States Code, shall apply, to the extent not inconsistent with this section, to the promotion of technology from research by Centers under this section except for contracts for such specific technology extension or transfer services as may be specified by statute or by the Director.

''(7) PROTECTION OF CENTER CLIENT CONFIDENTIAL INFORMATION.—Section 552 of title 5, United States Code, shall apply to the following information obtained by the Federal Government on a confidential basis in connection with the activities of any participant involved in the Hollings Manufacturing Extension Partnership:

''(A) Information on the business operation of any participant in a Hollings Manufacturing Extension Partnership program or of a client of a Center.

''(B) Trade secrets possessed by any client of a Center.

''(8) ADVISORY BOARDS.—Each Center's advisory boards shall institute a conflict of interest policy, approved by the Director, that ensures the Board represents local small and medium-sized manufacturers in the Center's region. Board Members may not serve as a vendor or provide services to the Center, nor may they serve on more than one Center's oversight board simultaneously.

''(d) ACCEPTANCE OF FUNDS.—

''(1) IN GENERAL.—In addition to such sums as may be appropriated to the Secretary and Director to operate the Hollings Manufacturing Extension Partnership, the Secretary and Director also may accept funds from other Federal departments and agencies and, under section 2(c)(7), from the private sector for the purpose of strengthening United States manufacturing.

''(2) ALLOCATION OF FUNDS.—

''(A) FUNDS ACCEPTED FROM OTHER FEDERAL DEPARTMENTS OR AGENCIES.—The Director shall determine whether funds accepted from other Federal departments or agencies shall be counted in the calculation of the Federal share of capital and annual operating and maintenance costs under subsection (c).

''(B) FUNDS ACCEPTED FROM THE PRIVATE SECTOR.—Funds accepted from the private sector under section 2(c)(7), if allocated to a Center, may not be considered in the calculation of the Federal share under subsection (c) of this section.

''(e) MEP ADVISORY BOARD.—

''(1) ESTABLISHMENT.—There is established within the Institute a Manufacturing Extension Partnership Advisory Board (in this subsection referred to as the 'MEP Advisory Board').

''(2) MEMBERSHIP.—

''(A) IN GENERAL.—The MEP Advisory Board shall consist of not fewer than 10 members broadly representative of stakeholders, to be appointed by the Director. At least 2 members shall be employed by or on an advisory board for the Centers, at least 1 member shall represent a community college, and at least 5 other members shall be from United States small businesses in the manufacturing sector. No member shall be an employee of the Federal Government.

''(B) TERM.—Except as provided in subparagraph (C) or (D), the term of office of each member of the MEP Advisory Board shall be 3 years.

''(C) VACANCIES.—Any member appointed to fill a vacancy occurring prior to the expiration of the term for which his predecessor was appointed shall be appointed for the remainder of such term.

''(D) SERVING CONSECUTIVE TERMS.—Any person who has completed two consecutive full terms of service on the MEP Advisory Board shall thereafter be ineligible for appointment during the one-year period following the expiration of the second such term.

''(3) MEETINGS.—The MEP Advisory Board shall meet not less than 2 times annually and shall provide to the Director—

''(A) advice on Hollings Manufacturing Extension Partnership programs, plans, and policies;

''(B) assessments of the soundness of Hollings Manufacturing Extension Partnership plans and strategies; and

''(C) assessments of current performance against Hollings Manufacturing Extension Partnership program plans.

''(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.

''(5) REPORT.—The MEP Advisory Board shall transmit an annual report to the Secretary for transmittal to Congress within 30 days after the submission to Congress of the President's annual budget request in each year. Such report shall address the status of the program established pursuant to this section and comment on the relevant sections of the programmatic planning document and updates thereto transmitted to Congress by the Director under subsections (c) and (d) of section 23.

''(f) COMPETITIVE GRANT PROGRAM.—

''(1) ESTABLISHMENT.—The Director shall establish, within the Hollings Manufacturing Extension Partnership, under this section and section 26, a program of competitive awards among participants described in paragraph (2) for the purposes described in paragraph (3).

''(2) PARTICIPANTS.—Participants receiving awards under this subsection shall be the Centers, or a consortium of such Centers.

''(3) PURPOSE.—The purpose of the program under this subsection is to add capabilities to the Hollings Manufacturing Extension Partnership, including the development of projects to solve new or emerging manufacturing problems as determined by the Director, in consultation with the Director of the Hollings Manufacturing Extension Partnership program, the MEP Advisory Board, and small and medium-sized manufacturers. One or more themes for the competition may be identified, which may vary from year to year, depending on the needs of manufacturers and the success of previous competitions. Centers may be reimbursed for costs incurred under the program.

''(4) APPLICATIONS.—Applications for awards under this subsection shall be submitted in such manner, at such time, and containing such information as the Director shall require, in consultation with the MEP Advisory Board.

''(5) SELECTION.—Awards under this subsection shall be peer reviewed and competitively awarded. The Director shall endeavor to have broad geographic diversity among selected proposals. The Director shall select proposals to receive awards that will—

''(A) improve the competitiveness of industries in the region in which the Center or Centers are located;

''(B) create jobs or train newly hired employees; and

''(C) promote the transfer and commercialization of research and technology from institutions of higher education, national laboratories, and nonprofit research institutes.

''(6) PROGRAM CONTRIBUTION.—Recipients of awards under this subsection shall not be required to provide a matching contribution.

''(7) GLOBAL MARKETPLACE PROJECTS.—In making awards under this subsection, the Director, in consultation with the MEP Advisory Board and the Secretary, may take into consideration whether an application has significant potential for enhancing the competitiveness of small and medium-sized United States manufacturers in the global marketplace.

''(8) DURATION.—Awards under this subsection shall last no longer than 3 years.

''(g) 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.

''(h) DEFINITIONS.—In this section—

''(1) the term 'area career and technical education school' has the meaning given such term in section 3 of the Carl D. Perkins Career and Technical Education Improvement Act of 2006 (20 U.S.C. 2302); and

''(2) 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. 409. ELIMINATION OF OBSOLETE REPORTS.

Section 28 of the National Institute of Standards and Technology Act (15 U.S.C. 278n) is amended—

(1) by striking subsection (g); and

(2) in subsection (k)—

(A) in paragraph (3), by inserting ''and'' after the semicolon at the end;

(B) in paragraph (4)(B), by striking ''; and'' at the end and inserting a period; and

(C) by striking paragraph (5).

SEC. 410. MODIFICATIONS TO GRANTS AND COOPERATIVE AGREEMENTS.

Section 8(a) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3706(a)) is amended by striking ''The total amount of any such grant or cooperative agreement may not exceed 75 percent of the total cost of the program.''.

SEC. 411. INFORMATION SYSTEMS STANDARDS CONSULTATION.

Section 20(c)(1) of the National Institute of Standards and Technology Act (15 U.S.C. 278g—3(c)(1)) is amended by striking ''the National Security Agency,''.

SEC. 412. UNITED STATES-ISRAELI COOPERATION.

It is the Sense of Congress that—

(1) partnerships that facilitate basic scientific research between the United States and Israel advance technology development, innovation, and commercialization leading to growth in various sectors, including manufacturing, and creating benefits for both nations;

(2) joint research and development agreements carried out through government organizations like the National Institute of Standards and Technology support these efforts;

(3) partnerships between the United States and Israel that further the basic scientific enterprise should be encouraged; and

(4) the National Institute of Standards and Technology should continue to facilitate scientific collaborations between Israel and United States' technical agencies working in measurement science and standardization.

TITLE V—DEPARTMENT OF ENERGY SCIENCE

SEC. 501. MISSION.

Section 209 of the Department of Energy Organization Act (42 U.S.C. 7139) is amended by adding at the end the following:

''(c) 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. In support of this mission, the Director shall carry out programs on basic energy sciences, advanced scientific computing research, high energy physics, biological and environmental research, fusion energy sciences, and nuclear physics, including as provided under subtitle A of title V of the America COMPETES Reauthorization Act of 2015, through activities focused on—

''(1) fundamental scientific discoveries through the study of matter and energy;

''(2) science in the national interest, including—

''(A) advancing an agenda for American energy security 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

''(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 materials science.

''(d) COORDINATION WITH OTHER DEPARTMENT OF ENERGY PROGRAMS.—The Under Secretary for Science and Energy shall ensure the coordination of Office of Science activities and programs with other activities of the Department.''.

SEC. 502. BASIC ENERGY SCIENCES.

(a) PROGRAM.—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) MISSION.—The mission of the program described in subsection (a) shall be to support fundamental research to understand, predict, and ultimately control matter and energy at the electronic, atomic, and molecular levels in order to provide the foundations for new energy technologies and to support Department missions in energy, environment, and national security.

(c) BASIC ENERGY SCIENCES USER FACILITIES.—The Director shall carry out a subprogram for the development, 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—

(1) x-ray light sources;

(2) neutron sources;

(3) nanoscale science research centers; and

(4) other facilities the Director considers appropriate, consistent with section 209 of the Department of Energy Organization Act (42 U.S.C. 7139).

(d) LIGHT SOURCE LEADERSHIP INITIATIVE.—

(1) ESTABLISHMENT.—In support of the subprogram authorized in subsection (c), the Director shall establish an initiative to sustain and advance global leadership of light source user facilities.

(2) LEADERSHIP STRATEGY.—Not later than 9 months after the date of enactment of this Act, and biennially thereafter, the Director shall prepare, in consultation with relevant stakeholders, and submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a light source leadership strategy that—

(A) identifies, prioritizes, and describes plans for the development, construction, and operation of light sources over the next decade;

(B) describes plans for optimizing management and use of existing light source facilities; and

(C) assesses the international outlook for light source user facilities and describes plans for United States cooperation in such projects.

(3) ADVISORY COMMITTEE FEEDBACK AND RECOMMENDATIONS.—Not later than 45 days after submission of the strategy described in paragraph (2), the Basic Energy Sciences Advisory Committee shall provide the Director, the Committee on Science, Space, and Technology of the House of Representatives, and the Committee on Energy and Natural Resources of the Senate a report of the Advisory Committee's analyses, findings, and recommendations for improving the strategy, including a review of the most recent budget request for the initiative.

(4) PROPOSED BUDGET.—The Director shall transmit annually to Congress a proposed budget corresponding to the activities identified in the strategy.

(e) ACCELERATOR RESEARCH AND DEVELOPMENT.—The Director shall carry out research and development on advanced accelerator and storage ring 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.

(f) ENERGY FRONTIER RESEARCH CENTERS.—

(1) IN GENERAL.—The Director shall carry out a 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.

(2) COLLABORATIONS.—A collaboration receiving an award 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. An Energy Frontier Research Center already in existence and supported by the Director 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.

(B) REAPPLICATION.—After the end of the period described in subparagraph (A), an awardee may reapply for selection for a second period of 5 years on a competitive, merit-reviewed basis.

(C) TERMINATION.—Consistent with the existing authorities of the Department, the Director may terminate an underperforming center for cause during the performance period.

(4) NO FUNDING FOR CONSTRUCTION.—No funding provided pursuant to this subsection may be used for the construction of new buildings or facilities.

SEC. 503. ADVANCED SCIENTIFIC COMPUTING RESEARCH.

(a) PROGRAM.—The Director shall carry out a research, development, and demonstration 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) FACILITIES.—The Director, as part of the program described in subsection (a), shall develop and maintain world-class computing and network facilities for science and deliver critical research in applied mathematics, computer science, and advanced networking to support the Department's missions.

(c) DEFINITIONS.—Section 2 of the Department of Energy High-End Computing Revitalization Act of 2004 (15 U.S.C. 5541) is amended by striking paragraphs (1) through (5) and inserting the following:

''(1) CO-DESIGN.—The term 'co-design' means the joint development of application algorithms, models, and codes with computer technology architectures and operating systems to maximize effective use of high-end computing systems.

''(2) DEPARTMENT.—The term 'Department' means the Department of Energy.

''(3) EXASCALE.—The term 'exascale' means computing system performance at or near 10 to the 18th power floating point operations per second.

''(4) HIGH-END COMPUTING SYSTEM.—The term 'high-end computing system' means a computing system with performance that substantially exceeds that of systems that are commonly available for advanced scientific and engineering applications.

''(5) INSTITUTION OF HIGHER EDUCATION.—The term 'institution of higher education' has the meaning given the term in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801).

''(6) LEADERSHIP SYSTEM.—The term 'leadership system' means a high-end computing system that is among the most advanced in the world in terms of performance in solving scientific and engineering problems.

''(7) NATIONAL LABORATORY.—The term 'National Laboratory' means any one of the seventeen laboratories owned by the Department.

''(8) SECRETARY.—The term 'Secretary' means the Secretary of Energy.

''(9) SOFTWARE TECHNOLOGY.—The term 'software technology' includes optimal algorithms, programming environments, tools, languages, and operating systems for high-end computing systems.''.

(d) DEPARTMENT OF ENERGY HIGH-END COMPUTING RESEARCH AND DEVELOPMENT PROGRAM.—Section 3 of the Department of Energy High-End Computing Revitalization Act of 2004 (15 U.S.C. 5542) is amended—

(1) in subsection (a)—

(A) in paragraph (1), by striking ''program'' and inserting ''coordinated program across the Department'';

(B) by striking ''and'' at the end of paragraph (1);

(C) by striking the period at the end of paragraph (2) and inserting ''; and''; and

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

''(3) partner with universities, National Laboratories, and industry to ensure the broadest possible application of the technology developed in this program to other challenges in science, engineering, medicine, and industry.'';

(2) in subsection (b)(2), by striking ''vector'' and all that follows through ''architectures'' and inserting ''computer technologies that show promise of substantial reductions in power requirements and substantial gains in parallelism of multicore processors, concurrency, memory and storage, bandwidth, and reliability''; and

(3) by striking subsection (d) and inserting the following:

''(d) EXASCALE COMPUTING PROGRAM.—

''(1) IN GENERAL.—The Secretary shall conduct a coordinated research program to develop exascale computing systems to advance the missions of the Department.

''(2) EXECUTION.—The Secretary shall, through competitive merit review, establish two or more National Laboratory-industry-university partnerships to conduct integrated research, development, and engineering of multiple exascale architectures, and—

''(A) conduct mission-related co-design activities in developing such exascale platforms;

''(B) develop those advancements in hardware and software technology required to fully realize the potential of an exascale production system in addressing Department target applications and solving scientific problems involving predictive modeling and simulation and large-scale data analytics and management; and

''(C) explore the use of exascale computing technologies to advance a broad range of science and engineering.

''(3) ADMINISTRATION.—In carrying out this program, the Secretary shall—

''(A) provide, on a competitive, merit-reviewed basis, access for researchers in United States industry, institutions of higher education, National Laboratories, and other Federal agencies to these exascale systems, as appropriate; and

''(B) conduct outreach programs to increase the readiness for the use of such platforms by domestic industries, including manufacturers.

''(4) REPORTS.—

''(A) INTEGRATED STRATEGY AND PROGRAM MANAGEMENT PLAN.—The Secretary shall submit to Congress, not later than 90 days after the date of enactment of the America COMPETES Reauthorization Act of 2015, a report outlining an integrated strategy and program management plan, including target dates for prototypical and production exascale platforms, interim milestones to reaching these targets, functional requirements, roles and responsibilities of National Laboratories and industry, acquisition strategy, and estimated resources required, to achieve this exascale system capability. The report shall include the Secretary's plan for Departmental organization to manage and execute the Exascale Computing Program, including definition of the roles and responsibilities within the Department to ensure an integrated program across the Department. The report shall also include a plan for ensuring balance and prioritizing across ASCR subprograms in a flat or slow-growth budget environment.

''(B) STATUS REPORTS.—At the time of the budget submission of the Department for each fiscal year, the Secretary shall submit a report to Congress that describes the status of milestones and costs in achieving the objectives of the exascale computing program.

''(C) EXASCALE MERIT REPORT.—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—

''(i) the proposed facility's cost projections and capabilities to significantly accelerate the development of new energy technologies;

''(ii) technical risks and challenges that must be overcome to achieve successful completion and operation of the facility; and

''(iii) an independent 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, including an evaluation of where investments should be made in the system software and algorithms to enable these advances.''.

SEC. 504. HIGH ENERGY PHYSICS.

(a) PROGRAM.—The Director shall carry out a research program on the fundamental constituents of matter and energy and the nature of space and time.

(b) SENSE OF CONGRESS.—It is the sense of the Congress that—

(1) the Director should incorporate the findings and recommendations of the Particle Physics Project Prioritization Panel's report entitled ''Building for Discovery: Strategic Plan for U.S. Particle Physics in the Global Context'', into the Department's planning process as part of the program described in subsection (a);

(2) the Director should prioritize domestically hosted research projects that will maintain the United States position as a global leader in particle physics and attract the world's most talented physicists and foreign investment for international collaboration; and

(3) the nations that lead in particle physics by hosting international teams dedicated to a common scientific goal attract the world's best talent and inspire future generations of physicists and technologists.

(c) 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 include collaborations with the National Science Foundation or international collaborations.

(d) 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, which may include collaborations with the National Aeronautics and Space Administration or the National Science Foundation, or international collaborations.

(e) ACCELERATOR RESEARCH AND DEVELOPMENT.—The Director shall carry out research and development in advanced accelerator concepts and technologies, including laser technologies, to reduce the necessary scope and cost for the next generation of particle accelerators. The Director shall ensure access to national laboratory accelerator facilities, infrastructure, and technology for users and developers of accelerators that advance applications in energy and the environment, medicine, industry, national security, and discovery science.

(f) 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. 505. BIOLOGICAL AND ENVIRONMENTAL RESEARCH.

(a) PROGRAM.—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) PRIORITY RESEARCH.—In carrying out this section, the Director shall prioritize fundamental research on biological systems and genomics science with the greatest potential to enable scientific discovery.

(c) ASSESSMENT.—Not later than 12 months after the date of enactment of this Act, the Comptroller General shall submit a report to Congress identifying climate science-related initiatives under this section that overlap or duplicate initiatives of other Federal agencies and the extent of such overlap or duplication.

(d) LIMITATION.—The Director shall not approve new climate science-related initiatives to be carried out through the Office of Science without making a determination that such work is unique and not duplicative of work by other Federal agencies. Not later than 3 months after receiving the assessment required under subsection (c), the Director shall cease those climate science-related initiatives identified in the assessment as overlapping or duplicative, unless the Director justifies that such work is critical to achieving American energy security.

(e) LOW DOSE RADIATION RESEARCH PROGRAM.—

(1) IN GENERAL.—The Director of the Department of Energy Office of Science shall carry out a research program on low dose radiation. The purpose of the program is to enhance the scientific understanding of and reduce uncertainties associated with the effects of exposure to low dose radiation in order to inform improved risk management methods.

(2) STUDY.—Not later than 60 days after the date of enactment of this Act, the Director shall enter into an agreement with the National Academies to conduct a study assessing the current status and development of a long-term strategy for low dose radiation research. Such study shall be completed not later than 18 months after the date of enactment of this Act. The study shall be conducted in coordination with Federal agencies that perform ionizing radiation effects research and shall leverage the most current studies in this field. Such study shall—

(A) identify current scientific challenges for understanding the long-term effects of ionizing radiation;

(B) assess the status of current low dose radiation research in the United States and internationally;

(C) formulate overall scientific goals for the future of low-dose radiation research in the United States;

(D) recommend a long-term strategic and prioritized research agenda to address scientific research goals for overcoming the identified scientific challenges in coordination with other research efforts;

(E) define the essential components of a research program that would address this research agenda within the universities and the National Laboratories; and

(F) assess the cost-benefit effectiveness of such a program.

(3) RESEARCH PLAN.—Not later than 90 days after the completion of the study performed under paragraph (2) the Secretary of Energy

shall deliver to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a 5-year research plan that responds to the study's findings and recommendations and identifies and prioritizes research needs.

(4) DEFINITION.—In this subsection, the term ''low dose radiation'' means a radiation dose of less than 100 millisieverts.

(5) RULE OF CONSTRUCTION.—Nothing in this subsection shall be construed to subject any research carried out by the Director under the research program under this subsection to any limitations described in section 977(e) of the Energy Policy Act of 2005 (42 U.S.C. 16317(e)).

SEC. 506. FUSION ENERGY.

(a) PROGRAM.—The Director shall carry out a fusion energy sciences research program to expand the fundamental understanding of plasmas and matter at very high temperatures and densities and to build the scientific foundation necessary to enable fusion power.

(b) FUSION MATERIALS RESEARCH AND DEVELOPMENT.—As part of the activities authorized in section 978 of the Energy Policy Act of 2005 (42 U.S.C. 16318)—

(1) 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 demonstrate materials that can endure the neutron, plasma, and heat fluxes expected in a fusion power system; and

(2) the Secretary shall—

(A) 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 fusion power; and

(B) provide an assessment of whether a single new facility that substantially addresses magnetic 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.

(c) TOKAMAK RESEARCH AND DEVELOPMENT.—

(1) IN GENERAL.—As part of the program described in subsection (a), the Director shall support research and development activities and facility operations to optimize the tokamak approach to fusion energy.

(2) ITER.—

(A) REPORT.—Not later than 1 year after the date of enactment of this Act, the Secretary shall submit to Congress a report providing an assessment of—

(i) the most recent schedule for ITER that has been approved by the ITER Council; and

(ii) progress of the ITER Council and the ITER Director General toward implementation of the recommendations of the Third Biennial International Organization Management Assessment Report.

(B) FAIRNESS IN COMPETITION FOR SOLICITATIONS FOR INTERNATIONAL PROJECT ACTIVITIES.—Section 33 of the Atomic Energy Act of 1954 (42 U.S.C. 2053) is amended by adding at the end the following: ''For purposes of this section, with respect to international research projects, the term 'private facilities or laboratories' shall refer to facilities or laboratories located in the United States.''.

(C) SENSE OF CONGRESS.—It is the sense of Congress that the United States should support a robust, diverse fusion program. It is further the sense of Congress that developing the scientific basis for fusion, providing research results key to the success of ITER, and training the next generation of fusion scientists are of critical importance to the United States and should in no way be diminished by participation of the United States in the ITER project.

(d) 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, laser, and pulsed power fusion systems.

(e) ALTERNATIVE AND ENABLING CONCEPTS.—

(1) IN GENERAL.—As part of the program described in subsection (a), the Director shall support research and development activities and facility operations at United States universities, national laboratories, and private facilities for a portfolio of alternative and enabling fusion energy concepts that may provide solutions to significant challenges to the establishment of a commercial magnetic fusion power plant, prioritized based on the ability of the United States to play a leadership role in the international fusion research community. Fusion energy concepts and activities explored under this paragraph may include—

(A) high magnetic field approaches facilitated by high temperature superconductors;

(B) advanced stellarator concepts;

(C) non-tokamak confinement configurations operating at low magnetic fields;

(D) magnetized target fusion energy concepts;

(E) liquid metals to address issues associated with fusion plasma interactions with the inner wall of the encasing device;

(F) immersion blankets for heat management and fuel breeding;

(G) advanced scientific computing activities; and

(H) other promising fusion energy concepts identified by the Director.

(2) COORDINATION WITH ARPA–E.—The Under Secretary and the Director shall coordinate with the Director of the Advanced Research Projects Agency–Energy (in this paragraph referred to as ''ARPA–E'') to—

(A) assess the potential for any fusion energy project supported by ARPA–E to represent a promising approach to a commercially viable fusion power plant;

(B) determine whether the results of any fusion energy project supported by ARPA–E merit the support of follow-on research activities carried out by the Office of Science; and

(C) avoid unintentional duplication of activities.

(f) GENERAL PLASMA SCIENCE AND APPLICATIONS.—Not later than 2 years after the date of enactment of this Act, the Secretary shall provide to Congress an assessment of opportunities in which the United States can provide world-leading contributions to advancing plasma science and non-fusion energy applications, and identify opportunities for partnering with other Federal agencies both within and outside of the Department of Energy.

(g) IDENTIFICATION OF PRIORITIES.—

(1) REPORT.—Not later than 2 years after the date of enactment of this Act, the Secretary shall transmit to Congress a report on the Department's proposed fusion energy research and development activities over the following 10 years under at least 3 realistic budget scenarios, including a scenario based on 3 percent annual growth in the non-ITER portion of the budget for fusion energy research and development activities. The report shall—

(A) 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;

(B) identify priorities for initiation of facility construction and facility decommissioning under each of those scenarios; and

(C) assess the ability of the United States fusion workforce to carry out the activities identified in subparagraphs (A) and (B), including the adequacy of college and university programs to train the leaders and workers of the next generation of fusion energy researchers.

(2) PROCESS.—In order to develop the report required under paragraph (1), the Secretary shall leverage best practices and lessons learned from the process used to develop the most recent report of the Particle Physics Project Prioritization Panel of the High Energy Physics Advisory Panel. No member of the Fusion Energy Sciences Advisory Committee shall be excluded from participating in developing or voting on final approval of the report required under paragraph (1).

SEC. 507. NUCLEAR PHYSICS.

(a) PROGRAM.—The Director shall carry out a program of experimental and theoretical research, and support associated facilities, to discover, explore, and understand all forms of nuclear matter.

(b) 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, medical, industrial, or other purposes. In making this determination, the Secretary shall—

(1) ensure that, as has been the policy of the United States since the publication in 1965 of Federal Register notice 30 Fed. Reg. 3247, isotope production activities do not compete with private industry unless critical national interests necessitate the Federal Government's involvement;

(2) ensure that activities undertaken pursuant to this section, to the extent practicable, promote the growth of a robust domestic isotope production industry; and

(3) consider any relevant recommendations made by Federal advisory committees, the National Academies, and interagency working groups in which the Department participates.

SEC. 508. 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) APPROACH.—In carrying out this section, the Director shall utilize all available approaches and mechanisms, including capital line items, minor construction projects, energy savings performance contracts, utility energy service contracts, alternative financing, and expense funding, as appropriate.

SEC. 509. DOMESTIC MANUFACTURING.

Not later than 1 year after the date of enactment of this Act, the Secretary shall transmit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a report on the current ability of domestic manufacturers to meet the procurement requirements for major ongoing projects funded by the Office of Science of the Department, including a calculation of the percentage of equipment acquired from domestic manufacturers for this purpose.

SEC. 510. AUTHORIZATION OF APPROPRIATIONS.

(a) FISCAL YEAR 2016.—There are authorized to be appropriated to the Secretary for the Office of Science for fiscal year 2016 $5,339,800,000, of which—

(1) $1,850,000,000 shall be for Basic Energy Science;

(2) $788,000,000 shall be for High Energy Physics;

(3) $550,000,000 shall be for Biological and Environmental Research;

(4) $624,700,000 shall be for Nuclear Physics;

(5) $621,000,000 shall be for Advanced Scientific Computing Research;

(6) $488,000,000 shall be for Fusion Energy Sciences;

(7) $113,600,000 shall be for Science Laboratories Infrastructure;

(8) $181,000,000 shall be for Science Program Direction;

(9) $103,000,000 shall be for Safeguards and Security; and

(10) $20,500,000 shall be for Workforce Development for Teachers and Scientists.

(b) FISCAL YEAR 2017.—There are authorized to be appropriated to the Secretary for the Office of Science for fiscal year 2017 $5,339,800,000, of which—

(1) $1,850,000,000 shall be for Basic Energy Science;

(2) $788,000,000 shall be for High Energy Physics;

(3) $550,000,000 shall be for Biological and Environmental Research;

(4) $624,700,000 shall be for Nuclear Physics;

(5) $621,000,000 shall be for Advanced Scientific Computing Research;

(6) $488,000,000 shall be for Fusion Energy Sciences;

(7) $113,600,000 shall be for Science Laboratories Infrastructure;

(8) $181,000,000 shall be for Science Program Direction;

(9) $103,000,000 shall be for Safeguards and Security; and

(10) $20,500,000 shall be for Workforce Development for Teachers and Scientists.

SEC. 511. DEFINITIONS.

In this title—

(1) the term ''Department'' means the Department of Energy;

(2) the term ''Director'' means the Director of the Office of Science of the Department; and

(3) the term ''Secretary'' means the Secretary of Energy.

TITLE VI—DEPARTMENT OF ENERGY APPLIED RESEARCH AND DEVELOPMENT

Subtitle A—Crosscutting Research and Development

SEC. 601. CROSSCUTTING RESEARCH AND DEVELOPMENT.

(a) CROSSCUTTING RESEARCH AND DEVELOPMENT.—The Secretary shall, through the Under Secretary for Science and Energy, utilize the capabilities of the Department to identify strategic opportunities for collaborative research, development, demonstration, and commercial application of innovative science and technologies for—

(1) advancing the understanding of the energy-water-land use nexus;

(2) modernizing the electric grid by improving energy transmission and distribution systems security and resiliency;

(3) utilizing supercritical carbon dioxide in electric power generation;

(4) subsurface technology and engineering;

(5) high performance computing;

(6) cybersecurity; and

(7) critical challenges identified through comprehensive energy studies, evaluations, and reviews.

(b) CROSSCUTTING APPROACHES.—To the maximum extent practicable, the Secretary shall seek to leverage existing programs, and consolidate and coordinate activities, throughout the Department to promote collaboration and crosscutting approaches within programs.

(c) ADDITIONAL ACTIONS.—The Secretary shall—

(1) prioritize activities that promote the utilization of all affordable domestic resources;

(2) develop a rigorous and realistic planning, evaluation, and technical assessment framework for setting objective, long-term strategic goals and evaluating progress that ensures the integrity and independence to insulate planning from political influence and the flexibility to adapt to market dynamics;

(3) ensure that activities shall be undertaken in a manner that does not duplicate other activities within the Department or other Federal Government activities; and

(4) identify programs that may be more effectively left to the States, industry, nongovernmental organizations, institutions of higher education, or other stakeholders.

SEC. 602. STRATEGIC RESEARCH PORTFOLIO ANALYSIS AND COORDINATION PLAN.

Section 994 of Energy Policy Act of 2005 (42 U.S.C. 16358) is amended to read as follows:

''SEC. 994. STRATEGIC RESEARCH PORTFOLIO ANALYSIS AND COORDINATION PLAN.

''(a) IN GENERAL.—The Secretary shall periodically review all of the science and technology activities of the Department in a strategic framework that takes into account the frontiers of science to which the Department can contribute, the national needs relevant to the Department's statutory missions, and global energy dynamics.

''(b) COORDINATION ANALYSIS AND PLAN.—As part of the review under subsection (a), the Secretary shall develop a plan to improve coordination and collaboration in research, development, demonstration, and commercial application activities across Department organizational boundaries.

''(c) PLAN CONTENTS.—The plan shall describe—

''(1) cross-cutting scientific and technical issues and research questions that span more than one program or major office of the Department;

''(2) how the applied technology programs of the Department are coordinating their activities, and addressing those questions;

''(3) ways in which the technical interchange within the Department, particularly between the Office of Science and the applied technology programs, can be enhanced, including limited ways in which the research agendas of the Office of Science and the applied programs can better interact and assist each other;

''(4) a description of how the Secretary will ensure that the Department's overall research agenda include, in addition to fundamental, curiosity-driven research, fundamental research related to topics of concern to the applied programs, and applications in Departmental technology programs of research results generated by fundamental, curiosity-driven research;

''(5) critical assessments of any ongoing programs that have experienced sub-par performance or cost over-runs of 10 percent or more over one or more years; and

''(6) activities that may be more effectively left to the States, industry, nongovernmental organizations, institutions of higher education, or other stakeholders.

''(d) PLAN TRANSMITTAL.—Not later than 1 year after the date of enactment of the America COMPETES Reauthorization Act of 2015, and every 4 years thereafter, the Secretary shall transmit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate the results of the review under subsection (a) and the coordination plan under subsection (b).''.

SEC. 603. STRATEGY FOR FACILITIES AND INFRASTRUCTURE.

(a) AMENDMENTS.—Section 993 of the Energy Policy Act of 2005 (42 U.S.C. 16357) is amended—

*(1) by amending the section heading to read as follows: ''**STRATEGY FOR FACILITIES AND INFRASTRUCTURE**''; and*

(2) in subsection (b)(1), by striking ''2008'' and inserting ''2018''.

(b) TABLE OF CONTENTS AMENDMENT.—The item relating to section 993 in the table of contents of the Energy Policy Act of 2005 is amended to read as follows:

''Sec. 993. Strategy for facilities and infrastructure.''.

Subtitle B—Electricity Delivery and Energy Reliability Research and Development

SEC. 611. DISTRIBUTED ENERGY AND ELECTRIC ENERGY SYSTEMS.

Section 921 of the Energy Policy Act of 2005 (42 U.S.C. 16211) is amended to read as follows:

''SEC. 921. DISTRIBUTED ENERGY AND ELECTRIC ENERGY SYSTEMS.

''(a) IN GENERAL.—The Secretary shall carry out programs of research, development, demonstration, and commercial application on distributed energy resources and systems reliability and efficiency, to improve the reliability and efficiency of distributed energy resources and systems, integrating advanced energy technologies with grid connectivity, including activities described in this subtitle. The programs shall address advanced energy technologies and systems and advanced grid security, resiliency, and reliability technologies.

''(b) OBJECTIVES.—To the maximum extent practicable, the Secretary shall seek to—

''(1) leverage existing programs;

''(2) consolidate and coordinate activities throughout the Department to promote collaboration and crosscutting approaches;

''(3) ensure activities are undertaken in a manner that does not duplicate other activities within the Department or other Federal Government activities; and

''(4) identify programs that may be more effectively left to the States, industry, nongovernmental organizations, institutions of higher education, or other stakeholders.''.

SEC. 612. ELECTRIC TRANSMISSION AND DISTRIBUTION RESEARCH AND DEVELOPMENT.

(a) AMENDMENTS.—Section 925 of the Energy Policy Act of 2005 (42 U.S.C. 16215) is amended—

*(1) by amending the section heading to read as follows: ''**ELECTRIC TRANSMISSION AND DISTRIBUTION RESEARCH AND DEVELOPMENT**'';*

(2) by amending subsection (a) to read as follows:

''(a) PROGRAM.—The Secretary shall establish a comprehensive research, development, and demonstration program to ensure the reliability, efficiency, and environmental integrity of electrical transmission and distribution systems, which shall include innovations for—

''(1) advanced energy delivery technologies, energy storage technologies, materials, and systems;

''(2) advanced grid reliability and efficiency technology development;

''(3) technologies contributing to significant load reductions;

''(4) advanced metering, load management, and control technologies;

''(5) technologies to enhance existing grid components;

''(6) the development and use of high-temperature superconductors to—

''(A) enhance the reliability, operational flexibility, or power-carrying capability of electric transmission or distribution systems; or

''(B) increase the efficiency of electric energy generation, transmission, distribution, or storage systems;

''(7) integration of power systems, including systems to deliver high-quality electric power, electric power reliability, and combined heat and power;

''(8) supply of electricity to the power grid by small scale, distributed, and residential-based power generators;

''(9) the development and use of advanced grid design, operation, and planning tools; and

''(10) any other infrastructure technologies, as appropriate.''; and

(3) by amending subsection (c) to read as follows:

''(c) IMPLEMENTATION.—

''(1) CONSORTIUM.—The Secretary shall consider implementing the program under this section using a consortium of participants from industry, institutions of higher education, and National Laboratories.

''(2) OBJECTIVES.—To the maximum extent practicable the Secretary shall seek to—

''(A) leverage existing programs;

''(B) consolidate and coordinate activities, throughout the Department to promote collaboration and crosscutting approaches;

''(C) ensure activities are undertaken in a manner that does not duplicate other activities within the Department or other Federal Government activities; and

''(D) identify programs that may be more effectively left to the States, industry, nongovernmental organizations, institutions of higher education, or other stakeholders.''.

(b) TABLE OF CONTENTS AMENDMENT.—The item relating to section 925 in the table of contents of the Energy Policy Act of 2005 is amended to read as follows:

''Sec. 925. Electric transmission and distribution research and development.''.

Subtitle C—Nuclear Energy Research and Development

SEC. 621. OBJECTIVES.

Section 951 of the Energy Policy Act of 2005 (42 U.S.C. 16271) is amended—

(1) by amending subsection (a) to read as follows:

''(a) IN GENERAL.—The Secretary shall conduct programs of civilian nuclear energy research, development, demonstration, and commercial application, including activities described in this subtitle. Such programs shall take into consideration the following objectives:

''(1) Enhancing nuclear power's viability as part of the United States energy portfolio.

''(2) Reducing used nuclear fuel and nuclear waste products generated by civilian nuclear energy.

''(3) Supporting technological advances in areas that industry by itself is not likely to undertake because of technical and financial uncertainty.

''(4) Providing the technical means to reduce the likelihood of nuclear proliferation.

''(5) Maintaining a cadre of nuclear scientists and engineers.

''(6) Maintaining National Laboratory and university nuclear programs, including their infrastructure.

''(7) Supporting both individual researchers and multidisciplinary teams of researchers to pioneer new approaches in nuclear energy, science, and technology.

''(8) Developing, planning, constructing, acquiring, and operating special equipment and facilities for the use of researchers.

''(9) Supporting technology transfer and other appropriate activities to assist the nuclear energy industry, and other users of nuclear science and engineering, including activities addressing reliability, availability, productivity, component aging, safety, and security of nuclear power plants.

''(10) Reducing the environmental impact of nuclear energy-related activities.

''(11) Researching and developing technologies and processes to meet Federal and State requirements and standards for nuclear power systems.'';

(2) by striking subsections (b) through (d); and

(3) by redesignating subsection (e) as subsection (b).

SEC. 622. PROGRAM OBJECTIVES STUDY.

Section 951 of the Energy Policy Act of 2005 (42 U.S.C. 16271) is further amended by adding at the end the following new subsection:

''(c) PROGRAM OBJECTIVES STUDY.—In furtherance of the program objectives listed in subsection (a) of this section, the Government Accountability Office shall, within one year after the date of enactment of this subsection, transmit to the Congress a report on the results of a study on the scientific and technical merit of major Federal and State requirements and standards, including moratoria, that delay or impede the further development and commercialization of nuclear power, and how the Department can assist in overcoming such delays or impediments.''.

SEC. 623. NUCLEAR ENERGY RESEARCH AND DEVELOPMENT PROGRAMS.

Section 952 of the Energy Policy Act of 2005 (42 U.S.C. 16272) is amended by striking subsections (c) through (e) and inserting the following:

''(c) REACTOR CONCEPTS.—

''(1) IN GENERAL.—The Secretary shall carry out a program of research, development, demonstration, and commercial application to advance nuclear power systems as well as technologies to sustain currently deployed systems.

''(2) DESIGNS AND TECHNOLOGIES.—In conducting the program under this subsection, the Secretary shall examine advanced reactor designs and nuclear technologies, including those that—

''(A) have higher efficiency, lower cost, and improved safety compared to reactors in operation as of the date of enactment of the America COMPETES Reauthorization Act of 2015;

''(B) utilize passive safety features;

''(C) minimize proliferation risks;

''(D) substantially reduce production of high-level waste per unit of output;

''(E) increase the life and sustainability of reactor systems currently deployed;

''(F) use improved instrumentation;

''(G) are capable of producing large-scale quantities of hydrogen or process heat;

''(H) minimize water usage or use alternatives to water as a cooling mechanism; or

''(I) use nuclear energy as part of an integrated energy system.

''(3) INTERNATIONAL COOPERATION.—In carrying out the program under this subsection, the Secretary shall seek opportunities to enhance the progress of the program through international cooperation through such organizations as the Generation IV International Forum or any other international collaboration the Secretary considers appropriate.

''(4) EXCEPTIONS.—No funds authorized to be appropriated to carry out the activities described in this subsection shall be used to fund the activities authorized under sections 641 through 645.''.

SEC. 624. SMALL MODULAR REACTOR PROGRAM.

Section 952 of the Energy Policy Act of 2005 (42 U.S.C. 16272) is further amended by adding at the end the following new subsection:

''(d) SMALL MODULAR REACTOR PROGRAM.—

''(1) IN GENERAL.—The Secretary shall carry out a small modular reactor program to promote research, development, demonstration, and commercial application of small modular reactors, including through cost-shared projects for commercial application of reactor systems designs.

''(2) CONSULTATION.—The Secretary shall consult with and utilize the expertise of the Secretary of the Navy in establishing and carrying out such program.

''(3) ADDITIONAL ACTIVITIES.—Activities may also include development of advanced computer modeling and simulation tools, by Federal and non-Federal entities, which demonstrate and validate new design capabilities of innovative small modular reactor designs.

''(4) DEFINITION.—For the purposes of this subsection, the term 'small modular reactor' means a nuclear reactor meeting generally accepted industry standards—

''(A) with a rated capacity of less than 300 electrical megawatts;

''(B) with respect to which most parts can be factory assembled and shipped as modules to a reactor plant site for assembly; and

''(C) that can be constructed and operated in combination with similar reactors at a single site.''.

SEC. 625. FUEL CYCLE RESEARCH AND DEVELOPMENT.

(a) AMENDMENTS.—Section 953 of the Energy Policy Act of 2005 (42 U.S.C. 16273) is amended—

(1) in the section heading by striking ''**ADVANCED FUEL CYCLE INITIATIVE**'' and inserting ''**FUEL CYCLE RESEARCH AND DEVELOPMENT**'';

(2) by striking subsection (a);

(3) by redesignating subsections (b) through (d) as subsections (d) through (f), respectively; and

(4) by inserting before subsection (d), as so redesignated by paragraph (3) of this subsection, the following new subsections:

''(a) IN GENERAL.—The Secretary shall conduct a fuel cycle research, development, demonstration, and commercial application program (referred to in this section as the 'program') on fuel cycle options that improve uranium resource utilization, maximize energy generation, minimize nuclear waste creation, improve safety, mitigate risk of proliferation, and improve waste management in support of a national strategy for spent nuclear fuel and the reactor concepts research, development, demonstration, and commercial application program under section 952(c).

''(b) FUEL CYCLE OPTIONS.—Under this section the Secretary may consider implementing the following initiatives:

''(1) OPEN CYCLE.—Developing fuels, including the use of nonuranium materials and alternate claddings, for use in reactors that increase energy generation, improve safety performance and margins, and minimize the amount of nuclear waste produced in an open fuel cycle.

''(2) RECYCLE.—Developing advanced recycling technologies, including advanced reactor concepts to improve resource utilization, reduce proliferation risks, and minimize radiotoxicity, decay heat, and mass and volume of nuclear waste to the greatest extent possible.

''(3) ADVANCED STORAGE METHODS.—Developing advanced storage technologies for both onsite and long-term storage that substantially prolong the effective life of current storage devices or that substantially improve upon existing nuclear waste storage technologies and methods, including repositories.

''(4) FAST TEST REACTOR.—Investigating the potential research benefits of a fast test reactor user facility to conduct experiments on fuels and materials related to fuel forms and fuel cycles that will increase fuel utilization, reduce proliferation risks, and reduce nuclear waste products.

''(5) ADVANCED REACTOR INNOVATION.—Developing an advanced reactor innovation testbed where national laboratories, universities, and industry can address advanced reactor design challenges to enable construction and operation of privately funded reactor prototypes to resolve technical uncertainty for United States-based designs for future domestic and international markets.

''(6) OTHER TECHNOLOGIES.—Developing any other technology or initiative that the Secretary determines is likely to advance the objectives of the program.

''(c) ADDITIONAL ADVANCED RECYCLING AND CROSSCUTTING ACTIVITIES.—In addition to and in support of the specific initiatives described in paragraphs (1) through (5) of subsection (b), the Secretary may support the following activities:

''(1) Development and testing of integrated process flow sheets for advanced nuclear fuel recycling processes.

''(2) Research to characterize the byproducts and waste streams resulting from fuel recycling processes.

''(3) Research and development on reactor concepts or transmutation technologies that improve resource utilization or reduce the radiotoxicity of waste streams.

''(4) Research and development on waste treatment processes and separations technologies, advanced waste forms, and quantification of proliferation risks.

''(5) Identification and evaluation of test and experimental facilities necessary to successfully implement the advanced fuel cycle initiative.

''(6) Advancement of fuel cycle-related modeling and simulation capabilities.

''(7) Research to understand the behavior of high-burnup fuels.''.

(b) CONFORMING AMENDMENT.—The item relating to section 953 in the table of contents of the Energy Policy Act of 2005 is amended to read as follows:

''Sec. 953. Fuel cycle research and development.''.

SEC. 626. NUCLEAR ENERGY ENABLING TECHNOLOGIES PROGRAM.

(a) AMENDMENT.—Subtitle E of title IX of the Energy Policy Act of 2005 (42 U.S.C. 16271 et seq.) is amended by adding at the end the following new section:

''SEC. 958. NUCLEAR ENERGY ENABLING TECHNOLOGIES.

''(a) IN GENERAL.—The Secretary shall conduct a program to support the integration of activities undertaken through the reactor concepts research, development, demonstration, and commercial application program under section 952(c) and the fuel cycle research and development program under section 953, and support crosscutting nuclear energy concepts. Activities commenced under this section shall be concentrated on broadly applicable research and development focus areas.

''(b) ACTIVITIES.—Activities conducted under this section may include research involving—

''(1) advanced reactor materials;

''(2) advanced radiation mitigation methods;

''(3) advanced proliferation and security risk assessment methods;

''(4) advanced sensors and instrumentation;

''(5) high performance computation modeling, including multiphysics, multidimensional modeling simulation for nuclear energy systems, and continued development of advanced modeling simulation capabilities through national laboratory, industry, and university partnerships for operations and safety performance improvements of light water reactors for currently deployed and near-term reactors and advanced reactors and for the development of small modular reactors; and

''(6) any crosscutting technology or transformative concept aimed at establishing substantial and revolutionary enhancements in the performance of future nuclear energy systems that the Secretary considers relevant and appropriate to the purpose of this section.

''(c) REPORT.—The Secretary shall submit, as part of the annual budget submission of the Department, a report on the activities of the program conducted under this section, which shall include a brief evaluation of each activity's progress.''.

(b) CONFORMING AMENDMENT.—The table of contents of the Energy Policy Act of 2005 is amended by adding at the end of the items for subtitle E of title IX the following new item:

''Sec. 958. Nuclear energy enabling technologies.''.

SEC. 627. TECHNICAL STANDARDS COLLABORATION.

(a) IN GENERAL.—The Director of the National Institute of Standards and Technology shall establish a nuclear energy standards committee (in this section referred to as the ''technical standards committee'') to facilitate and support, consistent with the National Technology Transfer and Advancement Act of 1995, the development or revision of technical standards for new and existing nuclear power plants and advanced nuclear technologies.

(b) MEMBERSHIP.—

(1) IN GENERAL.—The technical standards committee shall include representatives from appropriate Federal agencies and the private sector, and be open to materially affected organizations involved in the development or application of nuclear energy-related standards.

(2) CO-CHAIRS.—The technical standards committee shall be co-chaired by a representative from the National Institute of Standards and Technology and a representative from a private sector standards organization.

(c) DUTIES.—The technical standards committee shall, in cooperation with appropriate Federal agencies—

(1) perform a needs assessment to identify and evaluate the technical standards that are needed to support nuclear energy, including those needed to support new and existing nuclear power plants and advanced nuclear technologies, including developing the technical basis for regulatory frameworks for advanced reactors;

(2) formulate, coordinate, and recommend priorities for the development of new technical standards and the revision of existing technical standards to address the needs identified under paragraph (1);

(3) facilitate and support collaboration and cooperation among standards developers to address the needs and priorities identified under paragraphs (1) and (2);

(4) as appropriate, coordinate with other national, regional, or international efforts on nuclear energy-related technical standards in order to avoid conflict and duplication and to ensure global compatibility; and

(5) promote the establishment and maintenance of a database of nuclear energy-related technical standards.

(d) AUTHORIZATION OF APPROPRIATIONS.—To the extent provided for in advance by appropriations Acts, the Secretary may transfer to the Director of the National Institute of Standards and Technology not to exceed $1,000,000 for fiscal year 2016 for the Secretary of Commerce to carry out this section from amounts appropriated for nuclear energy research and development within the Nuclear Energy Enabling Technologies account for the Department.

SEC. 628. AVAILABLE FACILITIES DATABASE.

The Secretary shall prepare a database of non-Federal user facilities receiving Federal funds that may be used for unclassified nuclear energy research. The Secretary shall make this database accessible on the Department's website.

SEC. 629. NUCLEAR WASTE DISPOSAL.

To the extent consistent with the requirements of current law, the Department shall be responsible for disposal of high-level radioactive waste or spent nuclear fuel generated by reactors under the programs authorized in this subtitle, or the amendments made by this subtitle.

Subtitle D—Energy Efficiency and Renewable Energy Research and Development

SEC. 641. ENERGY EFFICIENCY.

Section 911 of the Energy Policy Act of 2005 (42 U.S.C. 16191) is amended to read as follows:

''SEC. 911. ENERGY EFFICIENCY.

''(a) OBJECTIVES.—The Secretary shall conduct programs of energy efficiency research, development, demonstration, and commercial application, including activities described in this subtitle. Such programs shall prioritize activities that industry by itself is not likely to undertake because of technical challenges or regulatory uncertainty, and take into consideration the following objectives:

''(1) Increasing energy efficiency.

''(2) Reducing the cost of energy.

''(3) Reducing the environmental impact of energy-related activities.

''(b) PROGRAMS.—Programs under this subtitle shall include research, development, demonstration, and commercial application of—

''(1) innovative, affordable technologies to improve the energy efficiency and environmental performance of vehicles, including weight and drag reduction technologies, technologies, modeling, and simulation for increasing vehicle connectivity and automation, and whole-vehicle design optimization;

''(2) cost-effective technologies, for new construction and retrofit, to improve the energy efficiency and environmental performance of buildings, using a whole-buildings approach;

''(3) advanced technologies to improve the energy efficiency, environmental performance, and process efficiency of energy-intensive and waste-intensive industries;

''(4) technologies to improve the energy efficiency of appliances and mechanical systems for buildings in extreme climates, including cogeneration, trigeneration, and polygeneration units;

''(5) advanced battery technologies; and

''(6) fuel cell and hydrogen technologies.''.

SEC. 642. NEXT GENERATION LIGHTING INITIATIVE.

Section 912 of the Energy Policy Act of 2005 (42 U.S.C. 16192) and the item relating thereto in the table of contents of that Act are repealed.

SEC. 643. BUILDING STANDARDS.

Section 914 of the Energy Policy Act of 2005 (42 U.S.C. 16194) is amended by striking subsection (c).

SEC. 644. SECONDARY ELECTRIC VEHICLE BATTERY USE PROGRAM.

Section 915 of the Energy Policy Act of 2005 (42 U.S.C. 16195) and the item relating thereto in the table of contents of that Act are repealed.

SEC. 645. NETWORK FOR MANUFACTURING INNOVATION PROGRAM.

To the extent provided for in advance by appropriations Acts, the Secretary may transfer to the National Institute of Standards and Technology up to $150,000,000 for the period encompassing fiscal years 2015 through 2017 from amounts appropriated for advanced manufacturing research and development under this subtitle (and the amendments made by this subtitle) for the Secretary of Commerce to carry out the Network for Manufacturing Innovation Program authorized under section 34 of the National Institute of Standards and Technology Act (15 U.S.C. 278s).

SEC. 646. ADVANCED ENERGY TECHNOLOGY TRANSFER CENTERS.

Section 917 of the Energy Policy Act of 2005 (42 U.S.C. 16197) is amended—

(1) in subsection (a)—

(A) by inserting ''and'' at the end of paragraph (2)(B);

(B) by striking ''; and'' at the end of paragraph (3) and inserting a period; and

(C) by striking paragraph (4);

(2) in subsection (b)—

(A) by striking paragraph (1);

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

(C) by striking paragraph (6);

(3) by amending subsection (g) to read as follows:

''(g) PROHIBITION.—None of the funds awarded under this section may be used for the construction of facilities or the deployment of commercially available technologies.''; and

(4) by striking subsection (i).

SEC. 647. RENEWABLE ENERGY.

Section 931 of the Energy Policy Act of 2005 (42 U.S.C. 16231) is amended to read as follows:

''SEC. 931. RENEWABLE ENERGY.

''(a) IN GENERAL.—

''(1) OBJECTIVES.—The Secretary shall conduct programs of renewable energy research, development, demonstration, and commercial application, including activities described in this subtitle. Such programs shall prioritize discovery research and development and take into consideration the following objectives:

''(A) Increasing the conversion efficiency of all forms of renewable energy through improved technologies.

''(B) Decreasing the cost of renewable energy generation and delivery.

''(C) Promoting the diversity of the energy supply.

''(D) Decreasing the dependence of the United States on foreign mineral resources.

''(E) Decreasing the environmental impact of renewable energy-related activities.

''(F) Increasing the export of renewable generation technologies from the United States.

''(2) PROGRAMS.—

''(A) SOLAR ENERGY.—The Secretary shall conduct a program of research, development, demonstration, and commercial application for solar energy, including innovations in—

''(i) photovoltaics;

''(ii) solar heating;

''(iii) concentrating solar power;

''(iv) lighting systems that integrate sunlight and electrical lighting in complement to each other; and

''(v) development of technologies that can be easily integrated into new and existing buildings.

''(B) WIND ENERGY.—The Secretary shall conduct a program of research, development, demonstration, and commercial application for wind energy, including innovations in—

''(i) low speed wind energy;

''(ii) testing and verification technologies;

''(iii) distributed wind energy generation; and

''(iv) transformational technologies for harnessing wind energy.

''(C) GEOTHERMAL.—The Secretary shall conduct a program of research, development, demonstration, and commercial application for geothermal energy, including technologies for—

''(i) improving detection of geothermal resources;

''(ii) decreasing drilling costs;

''(iii) decreasing maintenance costs through improved materials;

''(iv) increasing the potential for other revenue sources, such as mineral production; and

''(v) increasing the understanding of reservoir life cycle and management.

''(D) HYDROPOWER.—The Secretary shall conduct a program of research, development, demonstration, and commercial application for technologies that enable the development of new and incremental hydropower capacity, including:

''(i) Advanced technologies to enhance environmental performance and yield greater energy efficiencies.

''(ii) Ocean energy, including wave energy.

''(E) MISCELLANEOUS PROJECTS.—The Secretary shall conduct research, development, demonstration, and commercial application programs for—

''(i) the combined use of renewable energy technologies with one another and with other energy technologies, including the combined use of renewable power and fossil technologies;

''(ii) renewable energy technologies for cogeneration of hydrogen and electricity; and

''(iii) kinetic hydro turbines.

''(b) RURAL DEMONSTRATION PROJECTS.—In carrying out this section, the Secretary, in consultation with the Secretary of Agriculture, shall give priority to demonstrations that assist in delivering electricity to rural and remote locations including—

''(1) advanced renewable power technology, including combined use with fossil technologies;

''(2) biomass; and

''(3) geothermal energy systems.

''(c) ANALYSIS AND EVALUATION.—

''(1) IN GENERAL.—The Secretary shall conduct analysis and evaluation in support of the renewable energy programs under this subtitle. These activities shall be used to guide budget and program decisions, and shall include—

''(A) economic and technical analysis of renewable energy potential, including resource assessment;

''(B) analysis of past program performance, both in terms of technical advances and in market introduction of renewable energy;

''(C) assessment of domestic and international market drivers, including the impacts of any Federal, State, or local grants, loans, loan guarantees, tax incentives, statutory or regulatory requirements, or other government initiatives; and

''(D) any other analysis or evaluation that the Secretary considers appropriate.

''(2) FUNDING.—The Secretary may designate up to 1 percent of the funds appropriated for carrying out this subtitle for analysis and evaluation activities under this subsection.

''(3) SUBMITTAL TO CONGRESS.—This analysis and evaluation shall be submitted to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate at least 30 days before each annual budget request is submitted to Congress.''.

SEC. 648. BIOENERGY PROGRAM.

Section 932 of the Energy Policy Act of 2005 (42 U.S.C. 16232) is amended to read as follows:

''SEC. 932. BIOENERGY PROGRAM.

''(a) PROGRAM.—The Secretary shall conduct a program of research, development, demonstration, and commercial application for bioenergy, including innovations in—

''(1) biopower energy systems;

''(2) biofuels;

''(3) bioproducts;

''(4) integrated biorefineries that may produce biopower, biofuels, and bioproducts; and

''(5) cross-cutting research and development in feedstocks.

''(b) BIOFUELS AND BIOPRODUCTS.—The goals of the biofuels and bioproducts programs shall be to develop, in partnership with industry and institutions of higher education—

''(1) advanced biochemical and thermochemical conversion technologies capable of making fuels from lignocellulosic feedstocks that are price-competitive with fossil-based fuels and fully compatible with either internal combustion engines or fuel cell-powered vehicles;

''(2) advanced conversion of biomass to biofuels and bioproducts as part of integrated biorefineries based on either biochemical processes, thermochemical processes, or hybrids of these processes; and

''(3) other advanced processes that will enable the development of cost-effective bioproducts, including biofuels.

''(c) RETROFIT TECHNOLOGIES FOR THE DEVELOPMENT OF ETHANOL FROM CELLULOSIC MATERIALS.—The Secretary shall establish a program of research, development, demonstration, and commercial application for technologies and processes to enable biorefineries that exclusively use corn grain or corn starch as a feedstock to produce ethanol to be retrofitted to accept a range of biomass, including lignocellulosic feedstocks.

''(d) LIMITATIONS.—None of the funds authorized for carrying out this section may be used to fund commercial biofuels production for defense purposes.

''(e) DEFINITIONS.—In this section:

''(1) BIOMASS.—The term 'biomass' means—

''(A) any organic material grown for the purpose of being converted to energy;

''(B) any organic byproduct of agriculture (including wastes from food production and processing) that can be converted into energy; or

''(C) any waste material that can be converted to energy, is segregated from other waste materials, and is derived from—

''(i) any of the following forest-related resources: mill residues, precommercial thinnings, slash, brush, or otherwise nonmerchantable material;

''(ii) wood waste materials, including waste pallets, crates, dunnage, manufacturing and construction wood wastes (other than pressure-treated, chemically treated, or painted wood wastes), and landscape or right-of-way tree trimmings, but not including municipal solid waste, gas derived from the biodegradation of municipal solid waste, or paper that is commonly recycled; or

''(iii) solids derived from waste water treatment processes.

''(2) LIGNOCELLULOSIC FEEDSTOCK.—The term 'lignocellulosic feedstock' means any portion of a plant or coproduct from conversion, including crops, trees, forest residues, grasses, and agricultural residues not specifically grown for food, including from barley grain, grapeseed, rice bran, rice hulls, rice straw, soybean matter, cornstover, and sugarcane bagasse.''.

SEC. 649. CONCENTRATING SOLAR POWER RESEARCH PROGRAM.

Section 934 of the Energy Policy Act of 2005 (42 U.S.C. 16234) and the item relating thereto in the table of contents of that Act are repealed.

SEC. 650. RENEWABLE ENERGY IN PUBLIC BUILDINGS.

Section 935 of the Energy Policy Act of 2005 (42 U.S.C. 16235) and the item relating thereto in the table of contents of that Act are repealed.

Subtitle E—Fossil Energy Research and Development

SEC. 661. FOSSIL ENERGY.

Section 961 of Energy Policy Act of 2005 (42 U.S.C. 16291) is amended to read as follows:

''SEC. 961. FOSSIL ENERGY.

''(a) IN GENERAL.—The Secretary shall carry out research, development, demonstration, and commercial application programs in fossil energy, including activities under this subtitle, with the goal of improving the efficiency, effectiveness, and environmental performance of fossil energy production, upgrading, conversion, and consumption. Such programs shall take into consideration the following objectives:

''(1) Increasing the energy conversion efficiency of all forms of fossil energy through improved technologies.

''(2) Decreasing the cost of all fossil energy production, generation, and delivery.

''(3) Promoting diversity of energy supply.

''(4) Decreasing the dependence of the United States on foreign energy supplies.

''(5) Decreasing the environmental impact of energy-related activities.

''(6) Increasing the export of fossil energy-related equipment, technology, and services from the United States.

''(b) OBJECTIVES.—To the maximum extent practicable, the Secretary shall seek to—

''(1) leverage existing programs;

''(2) consolidate and coordinate activities throughout the Department to promote collaboration and crosscutting approaches;

''(3) ensure activities are undertaken in a manner that does not duplicate other activities within the Department or other Federal Government activities; and

''(4) identify programs that may be more effectively left to the States, industry, nongovernmental organizations, institutions of higher education, or other stakeholders.

''(c) LIMITATIONS.—

''(1) USES.—None of the funds authorized for carrying out this section may be used for Fossil Energy Environmental Restoration.

''(2) INSTITUTIONS OF HIGHER EDUCATION.—Not less than 20 percent of the funds appropriated for carrying out section 964 of this Act for each fiscal year shall be dedicated to research and development carried out at institutions of higher education.

''(3) USE FOR REGULATORY ASSESSMENTS OR DETERMINATIONS.—The results of any research, development, demonstration, or commercial application projects or activities of the Department authorized under this subtitle may not be used for regulatory assessments or determinations by Federal regulatory authorities.

''(d) ASSESSMENTS.—

''(1) CONSTRAINTS AGAINST BRINGING RESOURCES TO MARKET.—Not later than 1 year after the date of enactment of the America COMPETES Reauthorization Act of 2015, the Secretary shall transmit to Congress an assessment of the technical, institutional, policy, and regulatory constraints to bringing new domestic fossil resources to market.

''(2) TECHNOLOGY CAPABILITIES.—Not later than 2 years after the date of enactment of the America COMPETES Reauthorization Act of 2015, the Secretary shall transmit to Congress a long-term assessment of existing and projected technological capabilities for expanded production from domestic unconventional oil, gas, and methane reserves.''.

SEC. 662. COAL RESEARCH, DEVELOPMENT, DEMONSTRATION, AND COMMERCIAL APPLICATION PROGRAMS.

(a) IN GENERAL.—Section 962 of the Energy Policy Act of 2005 (42 U.S.C. 16292) is amended—

(1) in subsection (a)—

(A) in paragraph (10), by striking ''and'' at the end;

(B) in paragraph (11), by striking the period at the end and inserting a semicolon; and

(C) by adding at the end the following:

''(12) specific additional programs to address water use and reuse;

''(13) the testing, including the construction of testing facilities, of high temperature materials for use in advanced systems for combustion or use of coal; and

''(14) innovations to application of existing coal conversion systems designed to increase efficiency of conversion, flexibility of operation, and other modifications to address existing usage requirements.'';

(2) by redesignating subsections (b) through (d) as subsections (c) through (e), respectively;

(3) by inserting after subsection (a) the following:

''(b) TRANSFORMATIONAL COAL TECHNOLOGY PROGRAM.—

''(1) IN GENERAL.—As part of the program established under subsection (a), the Secretary may carry out a program designed to undertake research, development, demonstration, and commercial application of technologies, including the accelerated development of—

''(A) chemical looping technology;

''(B) supercritical carbon dioxide power generation cycles;

''(C) pressurized oxycombustion, including new and retrofit technologies; and

''(D) other technologies that are characterized by the use of—

''(i) alternative energy cycles;

''(ii) thermionic devices using waste heat;

''(iii) fuel cells;

''(iv) replacement of chemical processes with biotechnology;

''(v) nanotechnology;

''(vi) new materials in applications (other than extending cycles to higher temperature and pressure), such as membranes or ceramics;

''(vii) carbon utilization, such as in construction materials, using low quality energy to reconvert back to a fuel, or manufactured food;

''(viii) advanced gas separation concepts; and

''(ix) other technologies, including—

''(I) modular, manufactured components; and

''(II) innovative production or research techniques, such as using 3–D printer systems, for the production of early research and development prototypes.

''(2) COST SHARE.—In carrying out the program described in paragraph (1), the Secretary shall enter into partnerships with private entities to share the costs of carrying out the program. The Secretary may reduce the non-Federal cost share requirement if the Secretary determines that the reduction is necessary and appropriate considering the technological risks involved in the project.''; and

(4) in subsection (c) (as so redesignated) by striking paragraph (1) and inserting the following:

''(1) IN GENERAL.—In carrying out programs authorized by this section, the Secretary shall identify cost and performance goals for coal-based technologies that would permit the continued cost-competitive use of coal for the production of electricity, chemical feedstocks, transportation fuels, and other marketable products.''.

(b) ADVISORY COMMITTEE; AUTHORIZATION OF APPROPRIATIONS.—Section 963 of the Energy Policy Act of 2005 (42 U.S.C. 16293) is amended—

(1) by amending paragraph (6) of subsection (c) to read as follows:

''(6) ADVISORY COMMITTEE.—

''(A) IN GENERAL.—Subject to subparagraph (B), the Secretary shall establish an advisory committee to undertake, not less frequently than once every 3 years, a review and prepare a report on the progress being made by the Department of Energy to achieve the goals described in subsections (a) and (b) of section 962 and subsection (b) of this section.

''(B) MEMBERSHIP REQUIREMENTS.—Members of the advisory committee established under subparagraph (A) shall be appointed by the Secretary.''; and

(2) by amending subsection (d) to read as follows:

''(d) STUDY OF CARBON DIOXIDE PIPELINES.—Not later than 1 year after the date of enactment of the America COMPETES Reauthorization Act of 2015, the Secretary shall transmit to Congress the results of a study to assess the cost and feasibility of engineering, permitting, building, maintaining, regulating, and insuring a national system of carbon dioxide pipelines.''.

SEC. 663. HIGH EFFICIENCY GAS TURBINES RESEARCH AND DEVELOPMENT.

(a) IN GENERAL.—The Secretary, through the Office of Fossil Energy, shall carry out a multiyear, multiphase program of research, development, demonstration, and commercial application to innovate technologies to maximize the efficiency of gas turbines used in power generation systems.

(b) PROGRAM ELEMENTS.—The program under this section shall—

(1) support innovative engineering and detailed gas turbine design for megawatt-scale and utility-scale electric power generation, including—

(A) high temperature materials, including superalloys, coatings, and ceramics;

(B) improved heat transfer capability;

(C) manufacturing technology required to construct complex three-dimensional geometry parts with improved aerodynamic capability;

(D) combustion technology to produce higher firing temperature while lowering nitrogen oxide and carbon monoxide emissions per unit of output;

(E) advanced controls and systems integration;

(F) advanced high performance compressor technology; and

(G) validation facilities for the testing of components and subsystems;

(2) include technology demonstration through component testing, subscale testing, and full scale testing in existing fleets;

(3) include field demonstrations of the developed technology elements so as to demonstrate technical and economic feasibility; and

(4) assess overall combined cycle and simple cycle system performance.

(c) PROGRAM GOALS.—The goals of the multiphase program established under subsection (a) shall be—

(1) in phase I—

(A) to develop the conceptual design of advanced high efficiency gas turbines that can achieve at least 62 percent combined cycle efficiency or 47 percent simple cycle efficiency on a lower heating value basis; and

(B) to develop and demonstrate the technology required for advanced high efficiency gas turbines that can achieve at least 62 percent combined cycle efficiency or 47 percent simple cycle efficiency on a lower heating value basis; and

(2) in phase II, to develop the conceptual design for advanced high efficiency gas turbines that can achieve at least 65 percent combined cycle efficiency or 50 percent simple cycle efficiency on a lower heating value basis.

(d) PROPOSALS.—Within 180 days after the date of enactment of this Act, the Secretary shall solicit grant and contract proposals from industry, small businesses, universities, and other appropriate parties for conducting activities under this section. In selecting proposals, the Secretary shall emphasize—

(1) the extent to which the proposal will stimulate the creation or increased retention of jobs in the United States; and

(2) the extent to which the proposal will promote and enhance United States technology leadership.

(e) COMPETITIVE AWARDS.—The provision of funding under this section shall be on a competitive basis with an emphasis on technical merit.

(f) COST SHARING.—Section 988 of the Energy Policy Act of 2005 (42 U.S.C. 16352) shall apply to an award of financial assistance made under this section.

Subtitle F—Advanced Research Projects Agency–Energy

SEC. 671. ARPA–E AMENDMENTS.

Section 5012 of the America COMPETES Act (42 U.S.C. 16538) is amended—

(1) by amending paragraph (1) of subsection (c) to read as follows:

''(1) IN GENERAL.—The goals of ARPA–E shall be to enhance the economic and energy security of the United States and to ensure that the United States maintains a technological lead through the development of advanced energy technologies.'';

(2) in subsection (i)(1), by inserting ''ARPA–E shall not provide funding for a project unless the prospective grantee demonstrates sufficient attempts to secure private financing or indicates that the project is not independently commercially viable.'' after ''relevant research agencies.'';

(3) in subsection (l)(1), by inserting ''and once every 6 years thereafter,'' after ''operation for 6 years,''; and

(4) by redesignating subsection (n) as subsection (o) and inserting after subsection (m) the following new subsection:

''(n) PROTECTION OF PROPRIETARY INFORMATION.—

''(1) IN GENERAL.—The following categories of information collected by the Advanced Research Projects Agency–Energy from recipients of financial assistance awards shall be considered privileged and confidential and not subject to disclosure pursuant to section 552 of title 5, United States Code:

''(A) Plans for commercialization of technologies developed under the award, including business plans, technology to market plans, market studies, and cost and performance models.

''(B) Investments provided to an awardee from third parties, such as venture capital, hedge fund, or private equity firms, including amounts and percentage of ownership of the awardee provided in return for such investments.

''(C) Additional financial support that the awardee plans to invest or has invested into the technology developed under the award, or that the awardee is seeking from third parties.

''(D) Revenue from the licensing or sale of new products or services resulting from the research conducted under the award.

''(2) EFFECT OF SUBSECTION.—Nothing in this subsection affects—

''(A) the authority of the Secretary to use information without publicly disclosing such information; or

''(B) the responsibility of the Secretary to transmit information to Congress as required by law.''.

Subtitle G—Authorization of Appropriations

SEC. 681. AUTHORIZATION OF APPROPRIATIONS.

(a) ELECTRICITY DELIVERY AND ENERGY RELIABILITY RESEARCH AND DEVELOPMENT.—There are authorized to be appropriated to the Secretary for research, development, demonstration, and commercial application for electrical delivery and energy reliability technology activities within the Office of Electricity $113,000,000 for each of fiscal years 2016 and 2017.

(b) NUCLEAR ENERGY.—

(1) IN GENERAL.—There are authorized to be appropriated to the Secretary for research, development, demonstration, and commercial application for nuclear energy technology activities within the Office of Nuclear Energy $504,600,000 for each of fiscal years 2016 and 2017.

(2) LIMITATION.—Any amounts made available pursuant to the authorization of appropriations under paragraph (1) shall not be derived from the Nuclear Waste Fund established under section 302(c) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10222(c)).

(c) ENERGY EFFICIENCY AND RENEWABLE ENERGY.—There are authorized to be appropriated to the Secretary for research, development, demonstration, and commercial application for energy efficiency and renewable energy technology activities within the Office of Energy Efficiency and Renewable Energy $1,198,500,000 for each of fiscal years 2016 and 2017.

(d) FOSSIL ENERGY.—There are authorized to be appropriated to the Secretary for research, development, demonstration, and commercial application for fossil energy technology activities within the Office of Fossil Energy $605,000,000 for each of fiscal years 2016 and 2017.

(e) ARPA–E.—There are authorized to be appropriated to the Secretary for the Advanced Research Projects Agency–Energy $140,000,000 for each of fiscal years 2016 and 2017.

Subtitle H—Definitions

SEC. 691. DEFINITIONS.

In this title—

(1) the term ''Department'' means the Department of Energy; and

(2) the term ''Secretary'' means the Secretary of Energy.

TITLE VII—DEPARTMENT OF ENERGY TECHNOLOGY TRANSFER

Subtitle A—In General

SEC. 701. DEFINITIONS.

In this title:

(1) DEPARTMENT.—The term ''Department'' means the Department of Energy.

(2) NATIONAL LABORATORY.—The term ''National Laboratory'' means a Department of Energy nonmilitary national laboratory, including—

(A) Ames Laboratory;

(B) Argonne National Laboratory;

(C) Brookhaven National Laboratory;

(D) Fermi National Accelerator Laboratory;

(E) Idaho National Laboratory;

(F) Lawrence Berkeley National Laboratory;

(G) National Energy Technology Laboratory;

(H) National Renewable Energy Laboratory;

(I) Oak Ridge National Laboratory;

(J) Pacific Northwest National Laboratory;

(K) Princeton Plasma Physics Laboratory;

(L) Savannah River National Laboratory;

(M) Stanford Linear Accelerator Center;

(N) Thomas Jefferson National Accelerator Facility; and

(O) any laboratory operated by the National Nuclear Security Administration, but only with respect to the civilian energy activities thereof.

(3) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

SEC. 702. SAVINGS CLAUSE.

Nothing in this title or an amendment made by this title abrogates or otherwise affects the primary responsibilities of any National Laboratory to the Department.

Subtitle B—Innovation Management at Department of Energy

SEC. 711. UNDER SECRETARY FOR SCIENCE AND ENERGY.

(a) IN GENERAL.—Section 202(b) of the Department of Energy Organization Act (42 U.S.C. 7132(b)) is amended—

(1) by striking ''Under Secretary for Science'' each place it appears and inserting ''Under Secretary for Science and Energy''; and

(2) in paragraph (4)—

(A) in subparagraph (F), by striking ''and'' at the end;

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

(C) by inserting after subparagraph (G) the following:

''(H) establish appropriate linkages between offices under the jurisdiction of the Under Secretary; and

''(I) perform such functions and duties as the Secretary shall prescribe, consistent with this section.''.

(b) CONFORMING AMENDMENTS.—

(1) Section 3164(b)(1) of the Department of Energy Science Education Enhancement Act (42 U.S.C. 7381a(b)(1)) is amended by striking ''Under Secretary for Science'' and inserting ''Under Secretary for Science and Energy''.

(2) Section 641(h)(2) of the United States Energy Storage Competitiveness Act of 2007 (42 U.S.C. 17231(h)(2)) is amended by striking ''Under Secretary for Science'' and inserting ''Under Secretary for Science and Energy''.

SEC. 712. TECHNOLOGY TRANSFER AND TRANSITIONS ASSESSMENT.

Not later than 1 year after the date of enactment of this Act, and annually thereafter, the Secretary shall transmit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a report which shall include—

(1) an assessment of the Department's current ability to carry out the goals of section 1001 of the Energy Policy Act of 2005 (42 U.S.C. 16391), including an assessment of the role and effectiveness of the Director of the Office of Technology Transitions; and

(2) recommended departmental policy changes and legislative changes to section 1001 of the Energy Policy Act of 2005 (42 U.S.C. 16391) to improve the Department's ability to successfully transfer new energy technologies to the private sector.

SEC. 713. SENSE OF CONGRESS.

It is the sense of the Congress that the Secretary should encourage the National Laboratories and federally funded research and development centers to inform small businesses of the opportunities and resources that exist pursuant to this title.

SEC. 714. NUCLEAR ENERGY INNOVATION.

Not later than 180 days after the date of enactment of this Act, the Secretary, in consultation with the National Laboratories, relevant Federal agencies, and other stakeholders, shall transmit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a report assessing the Department's capabilities to authorize, host, and oversee privately funded fusion and non-light water reactor prototypes and related demonstration facilities at Department-owned sites. For purposes of this report, the Secretary shall consider the Department's capabilities to facilitate privately-funded prototypes up to 20 megawatts thermal output. The report shall address the following:

(1) The Department's safety review and oversight capabilities.

(2) Potential sites capable of hosting research, development, and demonstration of prototype reactors and related facilities for the purpose of reducing technical risk.

(3) The Department's and National Laboratories' existing physical and technical capabilities relevant to research, development, and oversight.

(4) The efficacy of the Department's available contractual mechanisms, including cooperative research and development agreements, work for others agreements, and agreements for commercializing technology.

(5) Potential cost structures related to physical security, decommissioning, liability, and other long-term project costs.

(6) Other challenges or considerations identified by the Secretary, including issues related to potential cases of demonstration reactors up to 2 gigawatts of thermal output.

Subtitle C—Cross-Sector Partnerships and Grant Competitiveness

SEC. 721. AGREEMENTS FOR COMMERCIALIZING TECHNOLOGY PILOT PROGRAM.

(a) IN GENERAL.—The Secretary shall carry out the Agreements for Commercializing Technology pilot program of the Department, as announced by the Secretary on December 8, 2011, in accordance with this section.

(b) TERMS.—Each agreement entered into pursuant to the pilot program referred to in subsection (a) shall provide to the contractor of the applicable National Laboratory, to the maximum extent determined to be appropriate by the Secretary, increased authority to negotiate contract terms, such as intellectual property rights, payment structures, performance guarantees, and multiparty collaborations.

(c) ELIGIBILITY.—

(1) IN GENERAL.—Any director of a National Laboratory may enter into an agreement pursuant to the pilot program referred to in subsection (a).

(2) AGREEMENTS WITH NON-FEDERAL ENTITIES.—To carry out paragraph (1) and subject to paragraph (3), the Secretary shall permit the directors of the National Laboratories to execute agreements with a non-Federal entity, including a non-Federal entity already receiving Federal funding that will be used to support activities under agreements executed pursuant to paragraph (1), provided that such funding is solely used to carry out the purposes of the Federal award.

(3) RESTRICTION.—The requirements of chapter 18 of title 35, United States Code (commonly known as the ''Bayh-Dole Act'') shall apply if—

(A) the agreement is a funding agreement (as that term is defined in section 201 of that title); and

(B) at least 1 of the parties to the funding agreement is eligible to receive rights under that chapter.

(d) SUBMISSION TO SECRETARY.—Each affected director of a National Laboratory shall submit to the Secretary, with respect to each agreement entered into under this section—

(1) a summary of information relating to the relevant project;

(2) the total estimated costs of the project;

(3) estimated commencement and completion dates of the project; and

(4) other documentation determined to be appropriate by the Secretary.

(e) CERTIFICATION.—The Secretary shall require the contractor of the affected National Laboratory to certify that each activity carried out under a project for which an agreement is entered into under this section—

(1) is not in direct competition with the private sector; and

(2) does not present, or minimizes, any apparent conflict of interest, and avoids or neutralizes any actual conflict of interest, as a result of the agreement under this section.

(f) EXTENSION.—The pilot program referred to in subsection (a) shall be extended until October 31, 2017.

(g) REPORTS.—

(1) OVERALL ASSESSMENT.—Not later than 60 days after the date described in subsection (f), the Secretary, in coordination with directors of the National Laboratories, shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a report that—

(A) assesses the overall effectiveness of the pilot program referred to in subsection (a);

(B) identifies opportunities to improve the effectiveness of the pilot program;

(C) assesses the potential for program activities to interfere with the responsibilities of the National Laboratories to the Department; and

(D) provides a recommendation regarding the future of the pilot program.

(2) TRANSPARENCY.—The Secretary, in coordination with directors of the National Laboratories, shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate an annual report that accounts for all incidences of, and provides a justification for, non-Federal entities using funds derived from a Federal contract or award to carry out agreements pursuant to this section.

SEC. 722. PUBLIC-PRIVATE PARTNERSHIPS FOR COMMERCIALIZATION.

(a) IN GENERAL.—Subject to subsections (b) and (c), the Secretary shall delegate to directors of the National Laboratories signature authority with respect to any agreement described in subsection (b) the total cost of which (including the National Laboratory contributions and project recipient cost share) is less than $1,000,000.

(b) AGREEMENTS.—Subsection (a) applies to—

(1) a cooperative research and development agreement;

(2) a non-Federal work-for-others agreement; and

(3) any other agreement determined to be appropriate by the Secretary, in collaboration with the directors of the National Laboratories.

(c) ADMINISTRATION.—

(1) ACCOUNTABILITY.—The director of the affected National Laboratory and the affected contractor shall carry out an agreement under this section in accordance with applicable policies of the Department, including by ensuring that the agreement does not compromise any national security, economic, or environmental interest of the United States.

(2) CERTIFICATION.—The director of the affected National Laboratory and the affected contractor shall certify that each activity carried out under a project for which an agreement is entered into under this section does not present, or minimizes, any apparent conflict of interest, and avoids or neutralizes any actual conflict of interest, as a result of the agreement under this section.

(3) AVAILABILITY OF RECORDS.—On entering an agreement under this section, the director of a National Laboratory shall submit to the Secretary for monitoring and review all records of the National Laboratory relating to the agreement.

(4) RATES.—The director of a National Laboratory may charge higher rates for services performed under a partnership agreement entered into pursuant to this section, regardless of the full cost of recovery, if such funds are used exclusively to support further research and development activities at the respective National Laboratory.

(d) EXCEPTION.—This section does not apply to any agreement with a majority foreign-owned company.

(e) CONFORMING AMENDMENT.—Section 12 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a) is amended—

(1) in subsection (a)—

(A) by redesignating paragraphs (1) and (2) as subparagraphs (A) and (B), respectively, and indenting the subparagraphs appropriately;

(B) by striking ''Each Federal agency'' and inserting the following:

''(1) IN GENERAL.—Except as provided in paragraph (2), each Federal agency''; and

(C) by adding at the end the following:

''(2) EXCEPTION.—Notwithstanding paragraph (1), in accordance with section 722(a) of the America COMPETES Reauthorization Act of 2015, approval by the Secretary of Energy shall not be required for any technology transfer agreement proposed to be entered into by a National Laboratory of the Department of Energy, the total cost of which (including the National Laboratory contributions and project recipient cost share) is less than $1,000,000.''; and

(2) in subsection (b), by striking ''subsection (a)(1)'' each place it appears and inserting ''subsection (a)(1)(A)''.

SEC. 723. INCLUSION OF EARLY-STAGE TECHNOLOGY DEMONSTRATION IN AUTHORIZED TECHNOLOGY TRANSFER ACTIVITIES.

Section 1001 of the Energy Policy Act of 2005 (42 U.S.C. 16391) is amended by—

(1) redesignating subsection (g) as subsection (h); and

(2) inserting after subsection (f) the following:

''(g) EARLY-STAGE TECHNOLOGY DEMONSTRATION.—The Secretary shall permit the directors of the National Laboratories to use funds authorized to support technology transfer within the Department to carry out early-stage and pre-commercial technology demonstration activities to remove technology barriers that limit private sector interest and demonstrate potential commercial applications of any research and technologies arising from National Laboratory activities.''.

SEC. 724. FUNDING COMPETITIVENESS FOR INSTITUTIONS OF HIGHER EDUCATION AND OTHER NONPROFIT INSTITUTIONS.

Section 988(b) of the Energy Policy Act of 2005 (42 U.S.C. 16352(b)) is amended—

(1) in paragraph (1), by striking ''Except as provided in paragraphs (2) and (3)'' and inserting ''Except as provided in paragraphs (2), (3), and (4)''; and

(2) by adding at the end the following:

''(4) EXEMPTION FOR INSTITUTIONS OF HIGHER EDUCATION AND OTHER NONPROFIT INSTITUTIONS.—

''(A) IN GENERAL.—Paragraph (1) shall not apply to a research or development activity performed by an institution of higher education or nonprofit institution (as defined in section 4 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3703)).

''(B) TERMINATION DATE.—The exemption under subparagraph (A) shall apply during the 6-year period beginning on the date of enactment of this paragraph.''.

SEC. 725. PARTICIPATION IN THE INNOVATION CORPS PROGRAM.

The Secretary may enter into an agreement with the Director of the National Science Foundation to enable researchers funded by the Department to participate in the National Science Foundation Innovation Corps program.

Subtitle D—Assessment of Impact

SEC. 731. REPORT BY GOVERNMENT ACCOUNTABILITY OFFICE.

Not later than 3 years after the date of enactment of this Act, the Comptroller General of the United States shall submit to Congress a report—

(1) describing the results of the projects developed under sections 721, 722, and 723, including information regarding—

(A) partnerships initiated as a result of those projects and the potential linkages presented by those partnerships with respect to national priorities and other taxpayer-funded research; and

(B) whether the activities carried out under those projects result in—

(i) fiscal savings;

(ii) expansion of National Laboratory capabilities;

(iii) increased efficiency of technology transfers; or

(iv) an increase in general efficiency of the National Laboratory system; and

(2) assess the scale, scope, efficacy, and impact of the Department's efforts to promote technology transfer and private sector engagement at the National Laboratories, and make recommendations on how the Department can improve these activities.

TITLE VIII—SENSE OF CONGRESS

SEC. 801. SENSE OF CONGRESS.

It is the sense of Congress that climate change is real.

The Acting CHAIR. No amendment to that amendment in the nature of a substitute shall be in order except those printed in part A of House Report 114–120. Each such amendment may be offered only in the order printed in the report, by a Member designated in the report, shall be considered as 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.

AMENDMENT NO. 1 OFFERED BY MR. SMITH OF TEXAS

The Acting CHAIR. It is now in order to consider amendment No. 1 printed in part A of House Report 114–120.

Mr. SMITH of Texas. Mr. Chairman, I have an amendment made in order under the rule.

The Acting CHAIR. The Clerk will designate the amendment.

The text of the amendment is as follows:

Page 5, line 13, strike ''$834,800,000'' and insert ''$823,000,000''.

Page 5, line 15, strike ''$1,050,000,000'' and insert ''$1,038,000,000''.

Page 5, line 18, strike ''$1,034,000,000'' and insert ''$1,010,000,000''.

Page 6, line 6, strike ''$377,500,000'' and insert ''$425,300,000''.

Page 7, line 6, strike ''$834,800,000'' and insert ''$823,000,000''.

Page 7, line 8, strike ''$1,050,000,000'' and insert ''$1,038,000,000''.

Page 7, line 11, strike ''$1,034,000,000'' and insert ''$1,010,000,000''.

Page 7, line 24, strike ''$377,500,000'' and insert ''$425,300,000''.

Page 20, line 19, insert ''available'' after ''financial resources''.

Page 21, lines 7 through 11, strike ''The Foundation shall also require awardees to report the Foundation, within 30 days of receipt, any sources of non-Federal funds received in excess of $50,000 during the award period.'' and insert ''The Foundation shall also require awardees seeking subsequent management fees to report to the Foundation, prior to the consideration of such a request, any sources of non-Federal funds received in excess of $100,000. This reporting shall apply to the period following any initial management fee award and for the consideration of any subsequent fee.''.

Page 21, line 20, strike ''AUDITS'' and insert ''REVIEW''.

Page 21, line 21, insert ''or review'' after ''may audit''.

Page 21, line 22, strike ''paragraph'' and insert ''subsection''.

Page 22, line 13, insert ''or social activities'' after ''meals''.

Page 22, line 16, insert ''or FAR 31.205–22'' after ''2 C.F.R. 200.450''.

Page 29, line 20, strike ''and''.

Page 29, line 23, strike the period and insert ''; and''.

Page 29, after line 23, insert the following:

(K) efforts to effectively expand, broaden, or scale-up existing activities or programs.

Page 65, line 23, insert '', to be available to the extent provided by appropriations Acts,'' after ''nonprofit entities,''.

Page 76, line 9, insert ''government,'' after ''industry,''.

Page 91, line 16, insert '', to be available to the extent provided by appropriations Acts,'' after ''sector,''.

Page 132, line 19, strike ''and''.

Page 132, line 23, strike the period and insert ''; and''.

Page 132, after line 23, insert the following:

''(7) detailed proposals for innovation hubs, institutes, and research centers prior to establishment or renewal by the Department, including—

''(A) certification that all hubs, institutes, and research centers will advance the mission of the Department, and prioritize research, development, and demonstration;

''(B) certification that the establishment or renewal of hubs, institutes, or research centers will not diminish funds available for basic research and development within the Office of Science; and

''(C) certification that all hubs, institutes, and research centers established or renewed within the Office of Science are consistent with the mission of the Office of Science as described in section 209(c) of the Department of Energy Organization Act (42 U.S.C. 7139(c)).''.

Page 136, line 14, strike ''and'' the end of paragraph (9).

Page 136, line 15, redesignate paragraph (10) as paragraph (11).

Page 136, after line 14, insert the following:

''(10) technologies to enhance security for electrical transmission and distributions systems; and

Page 151, lines 9 through 14, strike section 629.

Page 180, line 20, through page 182, line 3, strike section 711.

The Acting CHAIR. Pursuant to House Resolution 271, the gentleman from Texas (Mr. SMITH) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Texas.

Mr. SMITH of Texas. Mr. Chairman, this manager's amendment makes some changes to improve the underlying legislation.

The amendment shifts $48 million in funding within the research and related activities account at the National Science Foundation. This is at the request of Appropriations Commerce, Justice, Science and Related Agencies Subcommittee chairman, JOHN CULBERSON of Texas, and provides additional funding for integrative activities to keep it at the fiscal year '15 level.

This account includes the Graduate Research Fellowship Program and the Experimental Program to Stimulate Competitive Research, which will be fully funded at this level.

The amendment directs the Department of Energy to develop technologies to enhance security for electrical transmission and distribution systems.

The amendment includes additional direction on the development of hubs, innovation institutes, and research centers at the Department of Energy.

I urge my colleagues to support this amendment, and I reserve the balance of my time.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I claim the time in opposition to this amendment, although I do not oppose the amendment.

The Acting CHAIR. Without objection, the gentlewoman is recognized for 5 minutes.

There was no objection.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I yield myself such time as I may consume.

I appreciate that this amendment makes a few small improvements to the bill, so I will not oppose it. However, I want to take a moment to reflect on how this amendment demonstrates how flawed the process on the majority's bill has been.

In this amendment, the chairman restores an arbitrary 11 percent cut to the EPSCoR program, in addition to the prestigious NSF Graduate Research Fellowship Program, scientific instrumentation for smaller institutions that cannot afford their own, and interdisciplinary research centers.

Even our colleagues on Appropriations prioritized full funding for this account at NSF while they made steep cuts to other accounts.

It just happens that EPSCoR States overall are represented by many more Republicans than Democrats; so, when the Science Committee Republicans proposed cutting funding for the EPSCoR program by 11 percent, their caucus took notice.

If only the chairman had actually given the stakeholder community, his colleagues, and the research and development agencies an opportunity for a hearing or to see and respond or work in subcommittee on it and respond to this bill before introducing it, we wouldn't have had to fix all of these very big mistakes today.

I am glad the chairman is now restoring the cut to EPSCoR and the other important programs in that account. I only wish he would have listened to an overwhelming call by the stakeholder community and even some of his own colleagues to restore the other arbitrary and shortsighted cuts in this bill.

I yield back the balance of my time.

Mr. SMITH of Texas. Mr. Chairman, I have no other speakers on this side, and I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentleman from Texas (Mr. SMITH).

The amendment was agreed to.

AMENDMENT NO. 2 OFFERED BY MS. EDDIE BERNICE JOHNSON OF TEXAS

The Acting CHAIR. It is now in order to consider amendment No. 2 printed in part A of House Report 114–120.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I have an amendment at the desk as the designee of the gentleman from Illinois (Mr. FOSTER).

The Acting CHAIR. The Clerk will designate the amendment.

The text of the amendment is as follows:

Page 15, line 13, through page 17, line 9, strike section 106.

The Acting CHAIR. Pursuant to House Resolution 271, the gentlewoman from Texas (Ms. EDDIE BERNICE JOHNSON) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentlewoman from Texas.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I want to thank Mr. FOSTER for his leadership on this important issue.

Section 106 exemplifies the majority's efforts to impose their own personal beliefs and ideologies on the process of scientific discovery. Colleagues, science is not about belief; it is about discovery and the pursuit of questions about both the natural world and the human world.

We should hold NSF accountable, and NSF should hold its grantees accountable. However, accountability should be measured according to the transparency and integrity of the grant review process, not according to what types of science some of us believe in and some don't.

Had we imposed the section 106 requirement on NSF earlier, they may have never funded the grant that led to billions in revenue from the spectrum auction. They may never have funded the grant that the DOD now uses to help train our soldiers on the front lines to differentiate between friend and foe. They may never have funded the grant that led to the creation of Google.

Chairman SMITH has been investigating NSF grants he doesn't like since he became chairman of this committee. The entire purpose of section 106 is to give him a bigger club to continue his unfounded investigations in the future.

□ 1615

This is bad for NSF, and it is worse for the U.S. leadership in science and innovation. I urge my colleagues to think long and hard about the consequences of imposing our own political views and review on the NSF's gold-standard scientific merit review process, and I urge the support of Mr. FOSTER's amendment.

I reserve the balance of my time.

Mr. SMITH of Texas. Mr. Chairman, I claim time in opposition to this amendment.

The Acting CHAIR. The gentleman is recognized for 5 minutes.

Mr. SMITH of Texas. Mr. Chairman, it is just inconceivable to me that any U.S. Representative would oppose requiring government grants funded by the U.S. taxpayer to be spent in the national interest.

Throughout its history, the National Science Foundation has played an integral part in funding breakthrough discoveries in fields as diverse as mathematics, physics, chemistry, computer science, engineering, and biology.

However, the NSF has approved a number of grants for which the scientific merits and national interest are not obvious, to put it politely. These include a climate change musical costing $800,000, evaluating animal photographs in National Geographic for at least $200,000, and studying early human-set fires in New Zealand, in the 1800s, for several hundred thousand dollars.

The section this amendment strikes ensures that the NSF is transparent and accountable to the taxpayers about how their hard-earned dollars are spent. The bill requires that every NSF public announcement of a grant award be accompanied by a nontechnical explanation of the project's scientific merits and how it serves the national interest.

The NSF itself has recognized the need for this transparency and accountability. Last January, the NSF released a new policy that acknowledges that the NSF must communicate clearly and in nontechnical terms the research projects it funds. The policy

emphasizes that the title abstract for each funded grant should explain how the project serves the national interest, a requirement first cited in the 1950 legislation that created the National Science Foundation. Again, the national interest standard that the gentlewoman from Texas opposes was in the NSF's first charter.

The current Director of the NSF herself has endorsed the national interest standard. In her testimony before the House Science, Space, and Technology Committee on February 25, NSF Director France Cordova spoke about the very section the gentlewoman seeks to eliminate.

Dr. Cordova said: ''It is very compatible with the new internal NSF guidelines and with the mission statement of NSF.''

The national interest standard does not interfere with the merit review process. The bill clearly states: ''Nothing in this section shall be construed as altering the Foundation's intellectual merit or broader impacts criteria for evaluating grant applications.''

I urge my colleagues to oppose this amendment and to support the underlying legislation.

I reserve the balance of my time.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I yield such time as he may consume to the gentleman from Illinois (Mr. FOSTER), a physicist.

Mr. FOSTER. Mr. Chairman, my amendment, which I understand has been introduced, would strike section 106 of the bill, which, in my view, adds a dangerous political filter to NSF's gold-standard merit review process.

I do not stand alone in this view. The overwhelming majority of my colleagues in the scientific community are still quite uncomfortable with this language that would, as the American Society for Microbiology stated, ''have an adverse impact on NSF's peer review process, which is essential to funding meritorious research.'' All of us here want to be good stewards of taxpayer money.

This is also true of the National Science Foundation, which currently already requires that the NSF public award abstract consist of a nontechnical component which will include ''a public justification for NSF funding by articulating how the project serves the national interest,'' as stated by NSF's mission: to promote the progress of science; to advance the national health, prosperity, and welfare; or to secure the national defense.

As the Biophysical Society has pointed out: ''NSF is committed to . . . offering the public a better understanding of a research project's intent, which will satisfy this section's objective.''

The whole intent of this mystifies me a little bit. I serve on two committees—the Financial Services Committee and the Science, Space, and Technology Committee. On the Financial Services Committee, there is a steady drumbeat of Republican proposals to remove duplicitous and redundant requirements that just waste everyone's time; whereas, it seems to me that section 106 is exactly along this line. While it may just seem an innocuous waste of time to some, we know that for the past 2 years scientists have had their projects targeted as potentially wasteful or not ''in the national interest,'' often based on nothing but their titles. Not only is this wrong, it is blatantly political.

It is easy to make cheap shots here. My parents, actually, both worked for Senator Bill Proxmire, who for years and years did the Golden Fleece Awards. He was a wonderful and thoughtful Senator, but on this one, he consistently missed the mark. It is easy to make fun of projects with funny sounding names or with strange topics, but the NSF is the gold standard for a reason.

Take, for example, anthropologist Dr. Scott Atran, who received funding from the NSF in 1994 for a study that was entitled, ''Local Ecological Knowledge of Common-Pool Resources in Campeche, Mexico.'' Dr. Atran subsequently applied what he learned to questions of extremism in the Middle East and is now a key national expert on countering extremism in the Middle East, valued as a consultant by the Department of Defense and the Department of State.

The Acting CHAIR. The time of the gentlewoman from Texas has expired.

Mr. SMITH of Texas. Mr. Chairman, I will simply say to the gentleman from Illinois (Mr. FOSTER) that I recognize and appreciate him. He is a smart, thoughtful, and well-motivated member of the Science, Space, and Technology Committee, so I am really sorry he opposes this national interest standard that, I think, is the right thing to do for America and for the American taxpayers.

I yield the balance of my time to the gentleman from Illinois (Mr. LIPINSKI), who is a very active and talented member of the Science, Space, and Technology Committee.

Mr. LIPINSKI. Mr. Chairman, I want to commend my good friend from Illinois for his strong commitment to advocating for scientific research. I share many of his concerns about the underlying bill, and I will be voting against this bill. However, I must also oppose this amendment. I agree with Mr. FOSTER and I disagree with the chairman on some of the attacks on some past grants that have been granted by the NSF. I think section 106 helps to avoid that.

The first incarnation of what is now section 106 was the High Quality Research Act, which was unveiled nearly 2 years ago. I strongly opposed that, as did the vast majority of the research community, and we set about getting that changed. Through a series of discussions, the current language—vastly different and vastly improved from the original—was reached with a broad definition of national interest that does not do anything to undermine the gold-standard NSF peer review system. I invite all to read the section and decide for themselves, or to simply listen to the NSF and to the NSB, which oversees the NSF.

As the chairman said, NSF Director France Cordova stated her support for section 106 at a committee hearing in February, saying it is ''very compatible with the NSF internal guidelines and with the mission statement of NSF.''

I applaud NSF for these new guidelines which explain to the public why each proposal is being funded and how it is in the national interest. This will help the NSF defend worthwhile grants that are attacked by critics who sometimes misrepresent projects. In doing so, it will also protect the NSF.

While the National Science Board does not formally endorse legislation, at the meeting 2 weeks ago, the board passed a resolution strongly endorsing the principle that all Foundation-funded research must further the national interest by contributing to the Foundation's mission.

So, while I agree with my friend on almost everything related to science policy, I must reluctantly oppose this amendment. I wish we could have been able to have worked out a COMPETES bill we could all support. Regrettably, we did not, but let's not throw out this language that was worked out and that will help the NSF defend its peer review process.

Mr. SMITH of Texas. I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentlewoman from Texas (Ms. EDDIE BERNICE JOHNSON).

The question was taken; and the Acting Chair announced that the noes appeared to have it.

Mr. FOSTER. 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 gentlewoman from Texas will be postponed.

AMENDMENT NO. 3 OFFERED BY MS. JACKSON LEE

The Acting CHAIR. It is now in order to consider amendment No. 3 printed in part A of House Report 114–120.

Ms. JACKSON LEE. 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:

Page 29, line 20, strike ''and''.

Page 29, line 23, strike the period and insert a semicolon.

Page 29, after line 23, insert the following:

(K) creating State and regional workshops to train K-12 teachers in science and technology project-based learning to provide instruction in how to initiate robotics and other STEM competition team development programs; and

(L) encouraging and supporting efforts led by institutions of higher education, businesses, and local public and private educational agencies to establish collaborative

efforts to provide K-12 students residing in areas with unemployment rates that exceed the national average by 1 percent or more.

The Acting CHAIR. Pursuant to House Resolution 271, the gentlewoman from Texas (Ms. JACKSON LEE) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentlewoman from Texas.

Ms. JACKSON LEE. Mr. Chair, let me take a moment to thank both of my fellow Texans and to acknowledge that I know that there is a difference of opinion, but no one can disagree with the crucialness of America's competitiveness and of the necessity for creating a workforce that can compete.

Allow me to acknowledge Congressman JOHNSON for the steadfast commitment and service to the Science, Space, and Technology Committee. I had the privilege of serving with her in the early stages of my membership here in this august body, and I want to thank her personally for the great strides and successes that she has had in expanding opportunities for the most vulnerable in our community.

Mr. Chairman, my amendment speaks to this issue, and it continues to seek to address the STEM education gap for K–12 students. Jackson Lee amendment No. 3 creates State and regional workshops to train K–12 teachers in project-based science and technology learning, which will allow them to provide instruction in initiating robotics and other STEM competition team development programs.

I now serve on the Homeland Security Committee, and I note that the extent of technology in securing this Nation is without comparison. It is necessary. It is crucial. This amendment also leverages the collaboration among higher education businesses and local and private/public education agencies to support STEM efforts at schools located in areas where unemployment is 1 percent or more above the national rate.

We want to get right to the core of the most vulnerable and the most needy students. Robotic competitions and other similar competitive opportunities have proven to be one of the most successful paths for engaging young minds in STEM education. I have held a robotics competition, and it is absolutely amazing to see the young people's minds and hearts gather around it. My amendment has that capacity to it. Of course, it responds to the fact that only 1 out of 10 high schools in the U.S. offers computer science programs, and it is estimated that the education systems in 25 States do not count computer science classes toward high school graduation.

I ask my colleagues to support the Jackson Lee amendment, and I reserve the balance of my time.

Mr. SMITH of Texas. Mr. Chairman, I claim the time in opposition to the amendment, although I do not oppose the amendment.

The Acting CHAIR. Without objection, the gentleman is recognized for 5 minutes.

There was no objection.

Mr. SMITH of Texas. Mr. Chairman, this amendment would include teacher training for STEM competitions and collaborations as permitted activities under a program in the bill to encourage engagement in STEM education activities. Supporting out-of-school activities, like competitions, is consistent with the underlying bill, so I accept the gentlewoman's amendment.

I yield back the balance of my time.

Ms. JACKSON LEE. Mr. Chairman, how much time do I have remaining?

The Acting CHAIR. The gentlewoman from Texas has 2½ minutes remaining.

Ms. JACKSON LEE. Mr. Chairman, I want to focus just a little bit on competitions regarding this amendment, competitions such as FIRST, which is a national robotics competition that engages 400,000 students each year and that awards millions of dollars in scholarships, paving the way for future STEM success.

I submit for the RECORD a document entitled, ''Disparities in STEM Employment by Sex, Race, and Hispanic Origin.''

[From census.gov, Sept. 2013]

DISPARITIES IN STEM EMPLOYMENT BY SEX, RACE, AND HISPANIC ORIGIN

(By Liana Christin Landivar)

AMERICAN COMMUNITY SURVEY REPORTS

Introduction

Industry, government, and academic leaders cite increasing the science, technology, engineering, and mathematics (STEM) workforce as a top concern. The National Academy of Sciences, National Academy of Engineering, and the Institute of Medicine describe STEM as ''high-quality, knowledge-intensive jobs . . . that lead to discovery and new technology,'' improving the U.S. economy and standard of living. In 2007, Congress passed the America COMPETES Act, reauthorized in 2010, to increase funding for STEM education and research.

One focus area for increasing the STEM workforce has been to reduce disparities in STEM employment by sex, race, and Hispanic origin. Historically, women, Blacks, and Hispanics have been underrepresented in STEM employment. Researchers find that women, Blacks, and Hispanics are less likely to be in a science or engineering major at the start of their college experience, and less likely to remain in these majors by its conclusion. Because most STEM workers have a science or engineering college degree, underrepresentation among science and engineering majors could contribute to the underrepresentation of women, Blacks, and Hispanics in STEM employment.

This report details the historical demographic composition of STEM occupations, followed by a detailed examination of current STEM employment by age and sex, presence of children in the household, and race and Hispanic origin based on the 2011 American Community Survey (ACS). The report concludes with an examination of the demographic characteristics of science and engineering graduates who are currently employed in a STEM occupation.

Ms. JACKSON LEE. Specifically, the language says: ''Industry, government, and academic leaders cite increasing the science, technology, engineering, and mathematics (STEM) workforce as a top concern.''

This is in the American Community Survey Reports.

''One focus area for increasing the STEM workforce has been to reduce disparities in STEM employment by sex, race, and Hispanic origin. Historically, women, Blacks, and Hispanics have been underrepresented in STEM employment,'' and it goes on to elaborate.

□ 1630

This amendment gives an added opportunity to focus in, to hone in on teacher training and reaching out to those very hungry minds in the minority communities who are eager to be part of the changing fabric of America that focuses on science, technology, engineering, and math. From financial services, to homeland security, to space and aeronautics, to manufacturing, to the Silicon Valleys of the Nation, STEM is crucial.

I would like to now acknowledge both the committee staff on the majority and minority who assisted us, and I would like to acknowledge my staff, Lillie Coney, for her excellent work on these matters.

With that, Mr. Chairman, I ask for support of the Jackson Lee amendment.

Ms. JACKSON LEE. Mr. Chair, I have an amendment at the desk.

I thank Chairman SMITH and Ranking Member JOHNSON for the opportunity to speak on my amendment to H.R. 1806, the America COMPETES Reauthorization Act of 2015.

My amendment included in the Rule to H.R. 1806 would improve the bill by addressing the STEM education gap for K–12 students.

Jackson Lee Amendment #3, creates state and regional workshops to train K–12 teachers in project-based science and technology learning, which will allow them to provide instruction in initiating robotics and other STEM competition team development programs.

This amendment also leverages the collaboration among higher education, businesses, local private and public education agencies to support STEM efforts at schools located in areas with unemployment is 1 percent or more above the national rate.

Robotics competitions and other similar competitive opportunities have proven to be one of the most successful paths for engaging young minds in STEM education.

Competitions such as FIRST, a national robotics competition that engages 400,000 students each year and awards millions of dollars in scholarships are paving the way for future STEM success.

This Jackson Lee amendment focuses on reducing the STEM gaps that currently exists between K–12 students attending schools in different geographic regions or who come from diverse socioeconomic backgrounds.

Only 1 out of 10 high schools in the U.S. offer computer science programs

It is estimated that the education systems in 25 states do not count computer science classes toward high school graduation.

Both economists and business leaders have identified that the future of the American economy will be in STEM fields, which the Bureau of Labor Statistics estimates will create more than 9 million jobs between 2012 and 2022.

The STEM gap is more pronounced when considering minority groups.

U.S. Census 2010 data from the National Science Foundation and the U.S. Census Bureau, showed that underrepresented minorities earned 18.6 percent of total undergraduate degrees from 4-year colleges, but only 16.4 percent of the degrees in science fields and less than 13 percent of degrees in physical sciences and engineering.

Many historically underrepresented groups, including low income urban, rural and Native American communities have difficulty accessing STEM education and job training opportunities.

Jackson Lee Amendment #17 would have increased awareness among underrepresented groups in STEM employment and education opportunities by providing information on certification, undergraduate and graduate STEM programs.

One of the most enduring difficulties faced by underrepresented populations is a lack of awareness and understanding of the connection between STEM and employment opportunities.

In 2012, a survey found that despite the nation's growing demand for more workers in science, technology, engineering, and math grows, the skills gap among the largest ethnic and racial minorities groups remain stubbornly wide.

Blacks and Latinos account for only 7 percent, of the STEM workforce despite representing 28 percent of the U.S. population.

Jackson Lee Amendment #18 would have made sure that the issue of reducing the skills and education gap of underrepresented groups in STEM degree programs is considered as current STEM education federal programs were reviewed.

Jackson Lee Amendment #19 could have furthered the skills development and training of teachers who provide instruction in K–12 STEM courses where 40 percent of the students are on free or reduced lunch programs or in areas where unemployment is 1 percent or more above the national average.

Although most STEM specific education occurs in college and graduate school, interest in STEM fields must be fostered from a young age through successful K–12 programs.

Many schools serving low-income students lack the resources to provide continuity of STEM K–12 education, and as a result, students lose the opportunity to develop the skills that will prepare them for higher STEM education.

Jackson Lee Amendment #21 was an effort to identify no-cost or low-cost summer and after school science and technology educations programs and have that information broadly disseminated to the public.

Throughout primary and secondary education, skills retention is one of the most pressing concerns facing underrepresented students.

Without access to after-school and summer programs, even those students with a passion for STEM risk falling behind their peers.

Jackson Lee Amendment #22 made grants available to local education agencies to support training in STEM education methods to teachers to improve their instruction at schools serving neglected, delinquent, and migrant students, English learners, at-risk students, and Native Americans as determined by the director.

Jackson Lee Amendment #23 establishes within the Directorate for Education and Human Resources an Office of STEM Education Gap Awareness with the duties of reducing the STEM gap in K–12 and post-secondary education among underrepresented populations.

The Jackson Lee amendments are intended to bridge the STEM gap in rural and urban areas where opportunities for training in STEM that can enhance the productivity of businesses large and small are lacking.

The Brookings' Metropolitan Policy Program's report ''The Hidden STEM Economy,'' reported that in 2011, 26 million jobs or 20 percent of all occupations required knowledge in 1 or more STEM areas.

Half of all STEM jobs are available to workers without a 4 year degree and these jobs pay on average $53,000 a year, which is 10 percent higher than jobs with similar education requirements.

There will be STEM winners and losers not because the skills needed are too difficult to obtain, but because people are not aware of the jobs that are going unfilled today nor do they know what education or training will create job security for the next 2 to 3 decades.

I am very aware of the importance of STEM job training and education.

A third of Houston jobs are in STEM-based fields.

Houston has the second largest concentrations of engineers (22.4 for every 1,000 workers according to the Greater Houston Partnership).

Houston has 59,070 engineers, the second largest populations in the nation.

STEM jobs are at the core of Houston's economic success, but what we have done with STEM innovation and job creation in the city of Houston is not enough to satisfy the regions demand for STEM trained workers.

Houston anticipates that in the next 5 years the gap in the number of people with STEM skills and training will not keep up with the number of positions requiring those skills.

This is not just true for Houston, Texas—it is true for every region of the nation—whether you live in a rural community or urban center.

By 2018 the United States will need: 710,000 Computing workers; 160,000 Engineers; 70,000 Physical Scientists; 40,000 Life Science workers; 20,000 Mathematics workers.

STEM Computing Jobs are critical to America's future: Software engineers; Computer networking workers; Systems analysis; Computer researcher or support workers.

Types of STEM Engineering Jobs: Structural Engineers; Mechanical Engineers; Software Engineers; Electrical Engineers; Automotive Engineers; Aeronautical Engineers; Naval Engineers; Architects.

Types of STEM Physical Sciences Jobs: Biologists; Zoologists; Agricultural; Food Scientists; Conservation Scientists; Medical Scientists; Climatologists.

Types of STEM Life Scientists [PhDs]: Political Science; Economists; Anthropologists; Archaeology; Cultural Researchers; Language Experts (Linguistic and Language Skills).

Types of STEM Mathematics: Teachers; Physicists; Cryptographers; Statisticians; Accountants.

In order to ensure that underserved populations reach the level of STEM education and opportunity they choose to pursue, I believe it is integral to create an office that will focus on closing the STEM education gap.

I ask that my colleagues from both sides of the aisle support this amendment.

I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentlewoman from Texas (Ms. JACKSON LEE).

The amendment was agreed to.

AMENDMENT NO. 4 OFFERED BY MS. ESTY

The Acting CHAIR. It is now in order to consider amendment No. 4 printed in part A of House Report 114–120.

Ms. ESTY. 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:

Page 41, line 7, strike ''and'' after ''society;''.

Page 41, line 12, strike the period at the end and insert ''; and''.

Page 41, after line 12, insert the following new paragraph:

(4) I-Corps should continue to promote a strong innovation system by investing in and supporting female entrepreneurs, who are historically underrepresented in entrepreneurial fields, through mentorship, education, and training.

The Acting CHAIR. Pursuant to House Resolution 271, the gentlewoman from Connecticut (Ms. ESTY) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentlewoman from Connecticut.

Ms. ESTY. Mr. Chairman, my amendment would increase support for women in entrepreneurship at the National Science Foundation's Innovation Corps, also known as the I-Corps. It has been an honor and privilege to meet with women across Connecticut who are creating and building their own startups and small businesses.

In March I hosted a Women in Science, Technology, Engineering, and Math roundtable, bringing together educators, innovators, and business owners to identify barriers that women face when looking to advance in the critical STEM and entrepreneurial fields.

These local leaders all agreed that one of the biggest problems for women in the STEM fields is the lack of mentorship and support, and, quite simply, women do not have the same support and mentorship as their male counterparts because they are often the first women in leadership positions in their fields.

In fact, our Smaller Manufacturers Association in Connecticut just elected their first female president, Anne Strobel, and she has already hit the ground running to build on our State's strong manufacturing tradition.

National studies and experts echo the concerns women raised at the STEM roundtable in my own district. The Kauffman Foundation recently surveyed 350 female tech startup founders and found that the number one shared concern is a lack of role models and mentors for women thinking of going into business for themselves.

Recent news reports have noted the chronic underrepresentation of women

in the booming tech sector, including startups. In fact, women make up only 30 percent of the tech workforce and 22 percent of the leadership roles, despite being 60 percent of the workforce. It is clear that we must do more for women so they can build businesses and create good-paying jobs.

My amendment would provide that support to women through the NSF's Innovation Corps, known as the I-Corps, by expanding their mission to specifically include support for and investment in female entrepreneurs through mentorship, education, and training.

The I-Corps program fosters entrepreneurship by giving students the tools they need to move discoveries and technology from the research lab to the market. I-Corps is making a difference in helping teach and support entrepreneurs across the country.

In my own State, the University of Connecticut recently received I-Corps funding, and it is designated as an I-Corps site. Accelerate UConn will build on the investment the State of Connecticut is already making to ensure that they remain a leader in our national innovation ecosystem.

Our competitiveness as a nation depends on robust research and technology and on ensuring that we draw on the best and the brightest, whether they be men or women. By increasing the number of women entrepreneurs in the fields of science, technology, engineering, and math, we as a nation will all benefit from the innovation that comes from a diverse workforce.

It is not only morally right, but economically smart to foster entrepreneurship of women. I encourage all my colleagues to support my amendment.

I reserve the balance of my time.

Mr. SMITH of Texas. Mr. Chairman, I claim the time in opposition to the amendment, though I don't oppose the amendment.

The Acting CHAIR. Without objection, the gentleman is recognized for 5 minutes.

There was no objection.

Mr. SMITH of Texas. Mr. Chairman, this amendment would add a sense of Congress of Congress' support for the NSF's Innovation Corps program in the underlying bill. This language would include the promotion of a strong innovation system with investments and support for female entrepreneurs. I-Corps is an excellent program. I support the gentlewoman's amendment and appreciate her offering it.

I reserve the balance of my time.

Ms. ESTY. Mr. Chairman, may I inquire how much time I have remaining?

The Acting CHAIR. The gentlewoman from Connecticut has 2 minutes remaining.

Ms. ESTY. Mr. Chairman, I yield 1½ minutes to the gentleman from Virginia (Mr. BEYER).

Mr. BEYER. Mr. Chairman, I thank my friend for yielding and for her leadership on this important issue. I especially enjoy being on the same side of this issue with the chairman of the Committee on Science, Space, and Technology.

Mr. Chairman, I would like to add my voice to Representative ESTY's voice in support of her amendment. I-Corps is a revolutionary partnership that helps maximize the economic impact of taxpayer-funded research by connecting the brilliant minds at NSF to the brilliant minds in the private sector.

This amendment offered by Representative ESTY today ensures that we foster all of the brilliant minds by supporting female entrepreneurs. Gender diversity makes good business sense. Research conducted by Dow Jones on venture-backed companies found that successful ones had twice the number of women on the founding teams, and there is more research that shows that women-owned firms outperformed those owned by male counterparts. Despite this and despite the fact that women earn more college degrees than men, they comprise only 5 percent of Fortune 500 CEOs and only 19 percent of corporate board seats. Clearly, something is wrong.

For us to fully realize our economic potential, we have got to do a better job of supporting female entrepreneurs. That is why I strongly support her amendment and urge my colleagues to do the same.

Mr. SMITH of Texas. Mr. Chairman, I do not think I am going to disagree with what the gentlewoman from Connecticut has to say during her remaining time, so I yield back the balance of my time.

Ms. ESTY. Mr. Chairman, how much time do I have remaining?

The Acting CHAIR. The gentlewoman from Connecticut has 1 minute remaining.

Ms. ESTY. I yield such time as she may consume to the gentlewoman from Texas (Ms. EDDIE BERNICE JOHNSON), the ranking member, with my thanks.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I rise in support of this amendment and want to thank the author for bringing it forward and thank the chairman of the committee for supporting it.

Our support historically goes back to Congresswoman Connie Morella. The two of us did a study maybe 15 or 16 years ago, and we both have been very, very supportive of women in the sciences and hope that we can get a better bill so that we can address getting them ready for these jobs.

Ms. ESTY. I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentlewoman from Connecticut (Ms. ESTY).

The amendment was agreed to.

AMENDMENT NO. 5 OFFERED BY MR. CROWLEY

The Acting CHAIR. It is now in order to consider amendment No. 5 printed in part A of House Report 114–120.

Mr. CROWLEY. 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:

Page 45, after line 14, insert the following:

SEC. 127. HISPANIC OPPORTUNITY PROGRAM IN EDUCATION AND SCIENCE.

Not later than 120 days after the date of enactment of this Act, the Director of the National Science Foundation shall establish the program described in section 7033 of the America COMPETES Act (42 U.S.C. 1862o–12) for Hispanic-serving institutions (as defined in section 502 of the Higher Education Act of 1965 (20 U.S.C. 1101a)).

The Acting CHAIR. Pursuant to House Resolution 271, the gentleman from New York (Mr. CROWLEY) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from New York.

Mr. CROWLEY. Mr. Chairman, I yield myself 1½ minutes.

Mr. Chairman, 8 years ago when the House first considered the America COMPETES Act, I offered an amendment with my then-colleague Gabby Giffords as well as Congressman JERRY MCNERNEY to correct a longstanding inequity at the National Science Foundation. Unlike their counterparts in higher education, Hispanic-Serving Institutions have not benefited from a specific program at the NSF to provide them with grants for research, curriculum, and infrastructure development.

The amendment corrected this inequity, requiring the NSF to create a separate program for HSIs. It was adopted, and it became law. But to this day, the NSF has not implemented the program as codified in law. This bipartisan amendment would correct that and require the HSI program to finally be implemented within 4 months of the enactment of this measure.

Hispanic-Serving Institutions serve the majority of nearly 2 million Latino students enrolled in college today. In my district alone, about 10,000 students attend Hispanic-Serving Institutions offering degrees in these fields of science. Without access to targeted grants, HSIs have difficulty increasing the ranks of Latinos in the STEM fields, where they have been historically underrepresented.

We must ensure that Latinos, the youngest and fastest growing ethnic group in our Nation, are prepared with the knowledge and skills that will contribute to our Nation's future economic strength, security, and global leadership, because when education is available to everyone, our entire Nation is stronger.

I want to thank my colleagues who worked with me on this issue: Mr. SERRANO, who has a stand-alone bill to make this fix permanent, and Mr. LUJÁN, Mr. HURD, as well as Mr. CURBELO, who have cosponsored this amendment.

I reserve the balance of my time.

Mr. SMITH of Texas. Mr. Chairman, I claim the time in opposition to the amendment, though I don't oppose the amendment.

The Acting CHAIR. Without objection, the gentleman is recognized for 5 minutes.

There was no objection.

Mr. SMITH of Texas. Mr. Chairman, this amendment would require NSF to establish a program originally authorized in the 2007 COMPETES Act. I support the gentleman's amendment.

I reserve the balance of my time.

Mr. CROWLEY. Mr. Chairman, I appreciate the comments from the chairman.

I yield 1 minute to the gentleman from New York (Mr. SERRANO), my friend and a cosponsor of the amendment.

(Mr. SERRANO asked and was given permission to revise and extend his remarks.)

Mr. SERRANO. I thank my colleague for yielding me this time.

Mr. Chairman, as my colleague has said, in 2007 he added a provision to the original America COMPETES Act to give the NSF the discretion to establish a dedicated grant program. However, after years of persistence, the NSF has refused to act. That is why last month Mr. CROWLEY, Mr. LUJÁN, and myself introduced the HOPES Act.

Today's amendment replicates the HOPES Act and requires the NSF to establish an undergraduate grant program for Hispanic-Serving Institutions. Hispanics are underrepresented in the STEM fields, and more needs to be done to ensure that we are not missing the best and the brightest from all the parts of America in developing the next generation of scientists, engineers, and mathematicians.

This amendment is a big step in the right direction. I thank Representative CROWLEY for his leadership on this issue. I thank the chairman for accepting the amendment.

Mr. SMITH of Texas. Mr. Chairman, I yield 2 minutes to the gentleman from Texas (Mr. HURD).

Mr. HURD of Texas. Mr. Chairman, I rise in support of this amendment, which will benefit the students at several fine institutions in the 23rd Congressional District of Texas.

One thing that everybody here wants is a healthy economy. We want the American economy to continue to be the strongest in the world, and if American businesses are going to compete and win in a global economy, we have to have the best trained and best equipped workforce possible.

This means our institutions of higher learning need to be fully capable of offering their students the opportunities to learn the skills that are going to drive a 21st century economy, and that means STEM degrees must be a priority for our colleges and universities. This amendment will allow institutions that are designated as Hispanic-Serving Institutions to have access to grant programs with the National Science Foundation that they have been limited from participating in in the past.

There are 47 institutions like this in the State of Texas, and more than a dozen of them serve students in my district. This increased access to grants will help increase the recruitment, retention, and graduation rates of Hispanic students pursuing degrees in STEM fields. That is good for these students; that is good for our universities, our communities, our businesses, and our economy.

I want to thank the gentleman from New York, Mr. CROWLEY, for introducing this amendment. I encourage my colleagues to support it.

Mr. CROWLEY. I thank Mr. HURD for his comments.

I want the RECORD to reflect that I was willing and expecting to be yielding the gentleman 1 minute. Since the cooperation is running so smoothly, Mr. Chairman, thank you for yielding the 2 minutes to Mr. HURD.

With that, I yield 1 minute to the gentleman from New Mexico (Mr. BEN RAY LUJÁN).

Mr. BEN RAY LUJÁN of New Mexico. Mr. Chairman, I rise today in support of this amendment that I am proud to offer with my colleagues.

I want to thank Congressman CROWLEY for his leadership. I want to recognize Chairman SMITH for his responsibility in working and looking out for these students as well.

In today's world, science, technology, engineering, and math degrees translate into high-paying, in-demand jobs. While we are still struggling with high unemployment in my home State of New Mexico, there are sectors, especially in STEM, that are having difficulty finding qualified workers. To help meet this demand, the National Science Foundation manages a number of programs at minority-serving institutions, including Historically Black Colleges and Universities and Tribal Colleges and Universities.

□ 1645

These programs have filled an important void by preparing minority students for meaningful careers in STEM. However, there is no such program and, therefore, a lack of critical support for Hispanic Americans. This is also evident in the fact that Hispanics are severely underrepresented in the STEM workforce.

It is time that we fund the creation of a program for Hispanic-Serving Institutions to develop infrastructure, curriculum, and recruit Hispanic students into STEM fields. To do what is best for America, we need to invest and promote these programs.

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

Mr. CROWLEY. Mr. Chairman, how much time do I have remaining?

The Acting CHAIR. The gentleman from New York (Mr. CROWLEY) has 1½ minutes remaining.

Mr. CROWLEY. Mr. Chairman, I yield 1 minute to the gentlewoman from Texas (Ms. EDDIE BERNICE JOHNSON).

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, let me thank the gentleman and all of the persons who sponsored this amendment. I want to commend them.

When Mr. LUJÁN was on the Science Committee, we actually developed that language that did pass in the last COMPETES Act, so I fully support this amendment.

Mr. CROWLEY. Mr. Chairman, let me just use the remaining time to thank Chairman SMITH for his cooperation and that of his staff, as well as the cooperation of Ms. JOHNSON and her staff.

I do think that this amendment is the final tooth we need to make this law work and to drive the money and the resources to the people we intended for them to go to, and that is Latino or Hispanic young men and women who want to strive to succeed in the fields of science and medicine to help make our country an even better country.

I thank you both again for your cooperation, and I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentleman from New York (Mr. CROWLEY).

The amendment was agreed to.

AMENDMENT NO. 6 OFFERED BY MR. GRIFFITH

The Acting CHAIR. It is now in order to consider amendment No. 6 printed in part A of House Report 114–120.

Mr. GRIFFITH. 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:

Page 49, line 2, insert ''The Advisory Panel shall consist of 15 members, with 3 members appointed by the Speaker of the House of Representatives and 2 members appointed by the Majority Leader of the Senate.'' after ''other appropriate organizations.''.

Page 171, line 2, insert '', except that 3 members shall be appointed by the Speaker of the House of Representatives and 2 members shall be appointed by the Majority Leader of the Senate. The total number of members of the advisory committee shall be 15.'' after ''by the Secretary''.

The Acting CHAIR. Pursuant to House Resolution 271, the gentleman from Virginia (Mr. GRIFFITH) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Virginia.

Mr. GRIFFITH. Mr. Chairman, my amendment would make a couple of slight changes to two new advisory boards created in this bill: the STEM education advisory panel and a new Department of Energy advisory committee.

My amendment sets the total number of members for these two new advisory boards at 15 each, and most importantly, it ensures that five of the members on each board are chosen by Congress, three by the Speaker of the House and two by the Senate majority leader.

The purpose of my amendment is to ensure that the advisory boards have congressional representation, that we have people on there who work with Congress. The legislative branch is a

coequal branch of government, and I believe that, as an institution, Congress should more aggressively assert itself as a coequal branch.

This amendment has nothing to do with which party controls the legislative branch of government or which party, for that matter, controls the executive branch at any given time, nor does it ask for a majority of the members of these new boards to be congressionally appointed.

The amendment would simply ensure that the legislative branch is involved in these boards that it, the legislative branch, is creating and that we are involved in the process of creating the reports which both the legislative branch and executive branch will rely on to make important decisions for these United States.

If Congress deems an issue important enough to warrant an advisory board that is included in a bill we are passing, it just makes sense that we also appoint a portion of that board's membership.

I hope we will do that as we go forward with many of our boards. I also think it will facilitate more conversation between the executive branch and the legislative branch as time goes forward.

Mr. Chairman, I reserve the balance of my time.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I claim the time in opposition to the amendment.

The Acting CHAIR. The gentlewoman is recognized for 5 minutes.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I yield myself such time as I may consume.

This amendment allows the Speaker of the House of Representatives and the majority leader of the Senate to appoint members to two scientific advisory boards created in the bill. This amendment is the very definition of politicalizing science when we have politicians choosing who sits on scientific advisory boards.

While my colleagues across the aisle suggest that this amendment ensures accountability, in reality, it only ensures the political meddling in science. Unfortunately, this is consistent with many provisions in the underlying bill.

Scientific advisory boards provide expert scientific advice and make recommendations on subject matter from STEM education to energy research and development. It is essential that advisory board members be qualified and nonpolitical to provide nonpartisan advice and give appropriate recommendations that are free of bias, advice and recommendations based on the best available evidence, and advice and recommendations that will further science in the country, not inhibit it.

In this amendment, the Speaker of the House would appoint three members, while the majority leader of the Senate would appoint two additional members to this advisory board.

Some of these advisory boards have only 15 members. This amendment would allow Republican—and only Republican—leaders of Congress to appoint one-third of these members.

This amendment is clearly meant to politicize these advisory boards. While the sponsor of this amendment is messaging it as giving Congress a bigger voice, that is just not accurate, asked for, or necessary. Congress already has the biggest and final voice. We control the Federal budget. Congress writes authorization bills such as the one before us today. We do not lack influence.

Let's keep our scientific advisory boards free from political interference. If we choose to ignore the advice from our scientific advisory boards, as we are doing with H.R. 1806, that is our right. Congress doesn't also have to put its fingerprints directly on the advice itself. We know by what has been said today that we are trying to take over the responsibility on this bill that I am against, so that is one way you can do it.

This amendment follows the underlying attack on science in this bill, but this amendment goes further. It gives Republican politicians a chance to directly influence the scientific process in our country.

I urge my colleagues to reject this amendment and the underlying bill, and I yield back the balance of my time.

Mr. GRIFFITH. Mr. Chairman, I feel so bad that the gentlewoman thinks this is politicizing this bill. That is the furthest thing from my intent.

I know the gentlewoman does not know me and she does not know that, for 17 years, I served in the Virginia House of Delegates. In Virginia, any time we created a board or policy advisory group like this, we generally had legislative members on there.

What we found when we did that was that, when an idea came from the administrative branch, whether it was of the party that I was in or of a different party, we generally found that, by having people that were familiar with both sides of the issue, but people who also relied on and came to talk to us on a regular basis in the legislature, we felt more comfortable with those recommendations that had been made. We understood better what the background was. It made for better government.

That is what this is intended to do. I didn't ask for a majority. I didn't say that Congress should have complete control. It just says there ought to be some members appointed by the Senate and appointed by the House. It doesn't matter which party is in control of the House or Senate. Recently, that was divided. It doesn't matter which party is in the executive branch.

It just says this is a way to make sure that when you think it is important enough—when Congress thinks it is important enough to create an advisory board—that we both have some members, both the House and Senate, on that advisory board to make sure that there is interaction with us, as well as with the executive branch.

Unless the belief is that the executive branch wants to politicize it because they get all the appointments, I don't know why they would think these appointments would be politicizing it. It is just for informational purposes and to make sure that everybody is heard at the table and that those ideas are shared.

Ms. EDDIE BERNICE JOHNSON of Texas. Will the gentleman yield?

Mr. GRIFFITH. I yield to the gentlewoman.

Ms. EDDIE BERNICE JOHNSON of Texas. I served in both the house and senate in Texas before coming here; I believe strongly in input, but this very bill and its structure has become so political and so politically tainted in attempting to manipulate what is going on in our agencies, I just don't trust your amendment.

Mr. GRIFFITH. Reclaiming my time, I would say that I don't know the gentlewoman's concerns on this particular bill. I do believe, as a Congress, we ought to be working to make sure that we have input on all of these advisory committees, whether it is on this bill or any other bill.

Mr. Chairman, how much time do I have remaining?

The Acting CHAIR. The gentleman from Virginia has 1 minute remaining.

Mr. GRIFFITH. I yield 1 minute to the gentleman from Texas (Mr. SMITH).

Mr. SMITH of Texas. I thank the gentleman from Virginia for yielding.

Mr. Chairman, I will be very brief. I support the gentleman's amendment that will ensure that Congress has input on the composition of the new boards and panels created in the bill, and I urge my colleagues to support this amendment as well.

Mr. GRIFFITH. Mr. Chairman, I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentleman from Virginia (Mr. GRIFFITH).

The question was taken; and the Acting Chair announced that the ayes appeared to have it.

Ms. EDDIE BERNICE JOHNSON 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 Virginia will be postponed.

AMENDMENT NO. 7 OFFERED BY MR. KELLY OF PENNSYLVANIA

The Acting CHAIR. It is now in order to consider amendment No. 7 printed in part A of House Report 114–120.

Mr. KELLY of Pennsylvania. 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:

Page 71, line 21, strike ''$933,700,000'' and insert ''$938,700,000''.

Page 72, line 6, strike ''$130,000,000'' and insert ''$135,000,000''.

Page 72, line 8, strike ''$125,000,000'' and insert ''$130,000,000''.

Page 72, line 19, strike ''$933,700,000'' and insert ''$938,700,000''.

Page 73, line 3, strike ''$130,000,000'' and insert ''$135,000,000''.

Page 73, line 5, strike ''$125,000,000'' and insert ''$130,000,000''.

Page 178, line 4, strike ''$1,198,500,000'' and insert ''$1,193,500,000''.

The Acting CHAIR. Pursuant to House Resolution 271, the gentleman from Pennsylvania (Mr. KELLY) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Pennsylvania.

Mr. KELLY of Pennsylvania. Mr. Chairman, my amendment increases the authorized funding for the Manufacturing Extension Partnership by $5 million and it offsets it by decreasing the authorized funding for the Office of Energy Efficiency and Renewable Energy by $5 million, for level funding.

If our goal is to create and retain more American jobs, there is no better program to fund that than the Manufacturing Extension Partnership. Administered by the National Institute of Standards and Technology, with centers in every single State, for every $1 of Federal investment, this public-private partnership generates nearly $21 in new sales. As a result, this translates into $2.5 billion annually. For every $2,001 of Federal investment, MEP creates or retains one American manufacturing job.

The MEP programs provides our Nation's nearly 350,000 small manufacturers with services and access to resources that enhance growth, improve productivity, and expand capacity. This program is a win-win for our hard-working American taxpayers. Few, if any, other Federal programs can claim such a good return on our taxpayers' investment.

Considering this amendment authorizes the program at $130 million that helps small American manufacturers directly and at a 50 percent cost share, this gives taxpayers more bang for their buck.

The Office of Energy Efficiency and Renewable Energy has a total budget of over $1 billion, so moving $5 million to this valuable program for small businesses is simply good economic policy.

This program is not a government handout. Instead, it requires small manufacturers who partner with their local MEP to have skin in the game with a 50 percent cost share. That is good for our taxpayers; it is good for manufacturing sectors, and it is good for American jobs.

Since 1988, MEP has worked with nearly 80,000 American manufacturers, leading to $88 billion in sales and 14 billion in cost savings. It has helped create more than 729,000 American jobs.

Last year alone, MEP projects created or retained nearly 64,000 American jobs, generated more than $6.7 billion in new and retained sales, and provided cost savings of more than $1.1 billion to small American manufacturers.

□ 1700

With the average small- and mid-size American manufacturing employee earning more than $77,000 a year in pay and benefits, these are exactly the types of jobs that policymakers need to be encouraging. And at a time when our economy is starting to recover, the MEP's work is crucial in helping America's small manufacturers be stronger long-term competitors, both domestically and internationally.

In turn, this will allow them to create good-paying, high-skilled jobs for America's workers across the country. A growing manufacturing sector in America means more well-paying jobs for low- to moderate-income American families, reduced trade deficit and a robust economy, and a flourishing innovation sector which can drive future growth.

By supporting this amendment, Congress will be sending a clear signal to our small American manufacturers and our job creators that they will continue to play a vital role in the reinvigoration of our economy.

MEP is currently appropriated at $130 million, and this amendment would simply ensure that this popular, bipartisan program continues to be authorized at its current funding level.

Mr. Chairman, I reserve the balance of my time.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I rise in opposition to this amendment.

The Acting CHAIR. The gentlewoman is recognized for 5 minutes.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I yield myself such time as I may consume.

I strongly support the Manufacturing Extension Partnership program, or the MEP, at NIST. Since its establishment in 1988, the MEP program has generated billions of dollars in new sales; it has saved MEP clients billions of dollars; and it has helped create more than 700,000 jobs.

However, I cannot support this amendment because it increases the authorization for MEP by decreasing the authorization for the Office of Energy Efficiency and Renewable Energy at the Department of Energy. EERE conducts important research on energy efficiency and renewable energy technologies, including critical advance manufacturing initiatives.

Unfortunately, EERE has become a favorite target for my friends on the other side of the aisle. The underlying bill cuts this office by almost 30 percent, and this amendment would make that cut even larger.

I supported an amendment that would have increased MEP authorization to $141 million for fiscal year 2016, at the President's request, without cutting EERE. But the amendment was not made in order.

I strongly believe in MEP and want to see this funding level increased. I think it is important to note that this bill is an authorization bill, not an appropriations bill. In authorization bills, Congress should be deciding authorization levels by determining what the program needs to accomplish its responsibilities.

Notwithstanding current Republican protocols, authorization bills should not have the same constraints as appropriation bills, including needing to offset any increases. This is a bizarre approach to legislating.

Because of the unnecessary cut to EERE, I cannot support this amendment, and I urge my colleagues on both sides of the aisle to reject the false notion of needing to offset authorizations.

Mr. Chairman, I reserve the balance of my time.

Mr. KELLY of Pennsylvania. Mr. Chairman, I yield 30 seconds to the gentleman from Texas (Mr. SMITH).

Mr. SMITH of Texas. Mr. Chairman, I thank the gentleman from Pennsylvania for yielding me this time.

I just simply want to say that I believe his amendment restores current funding levels for the Manufacturing Extension Partnership program at the National Institute of Standards and Technology while offsetting those costs. It is a great amendment, and I urge my colleagues to support it.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I continue to reserve the balance of my time.

Mr. KELLY of Pennsylvania. Mr. Chairman, I would just remark that if we are really trying to create jobs, if we are really trying to boost our economy, if we are really trying to do all these things, if we are really trying to help small manufacturers, I don't think that asking to transfer $15 million out of a $1 billion allotment is going to really have that much effect on that.

This is not turning our back on some of the issues that you have, but this is looking forward to the future and saying we have got to help these people move forward.

This is not a government handout. This is not a free amount of money. This is a 50 percent match. There are very few programs in our government that require that.

This is something that just makes sense for America. It makes sense for all those folks that I represent and you represent back home.

I have got to tell you something. Back in Western Pennsylvania, where I live, in Pennsylvania's Third District, every morning, moms and dads get up and they throw their feet out over their bed and they go to work so that they can put a roof over the head for their children, food on their table, clothes on their back, and a promise for the future.

This is a small investment. All we are doing is keeping it at $130 million. And in a government that spends trillions of dollars every year, I don't know why we would quibble over $5 million because it is going to help job creation and job retention. It allows us to compete in a global market in a way that we actually win.

We don't have to get political about this. What I want to do is, I want to think about all the people we represent and where those dollars go because every single dollar belongs to the American taxpayer.

The Acting CHAIR. The gentleman is reminded to address all of his remarks to the Chair and not to other Members of the House.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I appreciate those remarks. He is describing my constituents as well. And if we had done as requested by the President, we would have left the authorization levels at the level he is trying to bring it to, and it would not have taken away from the other part of the research that is needed so badly in the other areas.

I do not oppose what he is trying to do. What I oppose is how he is trying to do it. And for that, I still oppose the total amount because it is not treating the other program fairly.

It is not that I oppose MEP. My constituents are no different than yours. They get up every day to work hard and need opportunities. I am sure many of yours get more opportunities than some of mine. And so I agree with that totally.

I agreed with the President's level of recommendation of where he wants to take it. What I disagree with is he is taking it out of another area when it is not necessary.

We are not appropriations. We are to recommend authorizations. We can do the authorization for his level without taking away from an area they don't like.

Mr. Chairman, I yield back the balance of my time.

The Acting CHAIR. Members are advised to address their remarks to the Chair and not to each other.

The question is on the amendment offered by the gentleman from Pennsylvania (Mr. KELLY).

The amendment was agreed to.

AMENDMENT NO. 8 OFFERED BY MR. LOWENTHAL

The Acting CHAIR. It is now in order to consider amendment No. 8 printed in part A of House Report 114–120.

Mr. LOWENTHAL. 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:

Page 114, line 23, through page 115, line 18, strike subsections (b) through (d).

The Acting CHAIR. Pursuant to House Resolution 271, the gentleman from California (Mr. LOWENTHAL) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from California.

Mr. LOWENTHAL. Mr. Chair, I yield myself such time as I may consume.

My amendment would do two important things. First, it would preserve the Energy Department's ability to select projects based on merit, and, second, it would preserve a very basic scientific tenet, the ability of the Department of Energy to replicate scientific results.

Right now, the underlying bill mandates the prioritization of certain scientific fields over others, and it terminates science initiatives that can validate or question the results of previous scientific research.

It is additionally unfortunate that in this formerly bipartisan bill, the majority is again attempting to specifically target and terminate the valuable research programs of some of our Nation's brightest scientists if they study climate change. I think this is shortsighted, I think it is irresponsible, and I believe it is wrong.

In order to ensure America's energy security, we must understand the multiplying risks to our energy infrastructure due to a changing climate. In order to ensure America's energy security, we must understand the lifecycle impacts of the fuels we use. And in order to ensure America's energy security, we must lead the world in developing clean renewable sources of energy.

For this vision to become a reality, the Department of Energy must support sound scientific processes that include selecting the most meritorious methods and questions that they wish to research and verifying those results through replication.

H.R. 1806, as it is currently written, specifically targets the climate change research program in the Energy Department and instructs the director to cease ''those climate science-related initiatives that are identified as overlapping or duplicative.''

A basic tenet of science is that you have to reproduce scientific results. You don't run an experiment once and go to the world and say, ''It's true. We've figured it out.''

No—science requires separate and independently verified results in order to draw conclusions. But now Congress is trying to legislate changes to the scientific method, and I think that is a shame.

Science works best when multiple groups and agencies collaborate to find answers to important questions. And guess what? Congress has already created a way to coordinate among the 13 Federal agencies to ensure that each agency is researching the causes and effects of global changes most relevant to their missions. And it is called the U.S. Global Change Research Program. The proposed requirements in section 505 of H.R. 1806 are really just an attempt to create more roadblocks to studying climate change.

My amendment preserves the scientific integrity of the Office of Science, the U.S. Global Change Research Program and, more importantly, the scientific process.

I urge a ''yes'' vote on the Lowenthal amendment, and I reserve the balance of my time.

Mr. SMITH of Texas. Mr. Chairman, I claim the time in opposition.

The Acting CHAIR. The gentleman is recognized for 5 minutes.

Mr. SMITH of Texas. Mr. Chairman, I yield as much time as he may consume to the gentleman from Arkansas (Mr. WESTERMAN), who is a member of the Science, Space, and Technology Committee.

Mr. WESTERMAN. Mr. Chairman, I rise today in opposition to the gentleman's amendment and in support of the underlying reforms included in H.R. 1806, the America COMPETES Reauthorization Act of 2015.

This amendment would remove important measures that ensure greater transparency for the Federal Government's climate science initiative and require accountability for the Office of Science to justify the value of related work going forward.

The gentleman's amendment would also remove underlying language in the America COMPETES Act that would require the Government Accountability Office to identify duplicative climate science initiatives across the entire Federal Government.

All Members of Congress should support transparency in federally funded research. It is our core responsibility to provide oversight for Federal programs and make sure American taxpayer dollars are being spent responsibly, not duplicating work that has already been done.

That said, the language in the America COMPETES Act does not ban any particular area of science but, instead, requires that DOE justify the science's merit and provide greater transparency if climate science work is intentionally duplicated.

This provision in the America COMPETES Act is simply good governance and is more important now than ever. The Obama administration has unapologetically pushed forward a politicized climate agenda through the Federal Government, prioritizing climate change research above all else. Better transparency can help prevent wasteful spending and prioritize the most valuable research.

H.R. 1806 authorizes the Office of Science within the Department of Energy to support basic research in the physical sciences, including research on Earth's atmosphere. By including these good government measures, the America COMPETES Act gives Congress appropriate oversight, funds valuable research, but does not provide a blank check for the President's climate agenda.

This amendment would strike these important accountability measures from the America COMPETES Act research. For that reason, I oppose the amendment and encourage my colleagues to do the same.

□ 1715

Mr. LOWENTHAL. Mr. Chairman, could you tell me how much time I have left.

The Acting CHAIR. The gentleman from California has 1½ minutes remaining.

Mr. LOWENTHAL. I yield 1 minute to the gentlewoman from Texas (Ms. EDDIE BERNICE JOHNSON).

Ms. EDDIE BERNICE JOHNSON of Texas. I thank the gentleman for yielding.

Mr. Chairman, it is not surprising that the Biological and Environmental Research program at DOE is targeted with harmful provisions in this bill. It is targeted because the program is a leader in advancing our understanding of the causes and impacts of climate change.

Hiding our heads in the sand will not solve anything, and it certainly won't stop the Earth from warming. Allowing partisan politics to skew the scientific understanding of climate change is cynical and shortsighted.

It is especially cynical considering that in the majority's own bill, they state that climate change is happening. They just had to take the statement out that it is caused by human beings.

The gentleman from California's amendment would simply strike those harmful provisions so that scientists supported by BER can continue their important work without political interference.

I urge my colleagues to support this important amendment.

Mr. SMITH of Texas. Mr. Chairman, I am prepared to close, so I reserve the balance of my time.

Mr. LOWENTHAL. Mr. Chair, I repeat: duplication is good science. Let me repeat that: duplication is good science.

I urge a ''yes'' vote on the Lowenthal amendment to maintain the Department of Energy's ability to select scientific projects based upon scientific merit, that support the mission of the Department of Energy and the broader energy security of our country.

I yield back the balance of my time.

Mr. SMITH of Texas. Mr. Chairman, this amendment would strike good government accountability measures within the COMPETES bill that require DOE's Office of Science to prioritize biological systems and genomic science. It would also strike reforms included in the America COMPETES Act that prevent duplication of research, which saves taxpayer dollars.

I encourage Members to oppose the amendment, and I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentleman from California (Mr. LOWENTHAL).

The question was taken; and the Acting Chair announced that the noes appeared to have it.

Mr. LOWENTHAL. 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 California will be postponed.

AMENDMENT NO. 9 OFFERED BY MR. GRAYSON

The Acting CHAIR. It is now in order to consider amendment No. 9 printed in part A of House Report 114–120.

Mr. GRAYSON. 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:

Page 133, before line 19, insert the following new section:

SEC. 604. ENERGY INNOVATION HUBS.

(a) AUTHORIZATION 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 awards to consortia for establishing and operating Energy Innovation Hubs to conduct and support, whenever practicable at one centralized location, multidisciplinary, collaborative research, development, and demonstration of advanced energy technologies.

(2) TECHNOLOGY DEVELOPMENT FOCUS.—The Secretary shall designate for each Hub a unique advanced energy technology 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, Energy Frontier Research Centers, and within industry.

(b) CONSORTIA.—

(1) ELIGIBILITY.—To be eligible to receive an award under this section for the establishment and operation of a Hub, a consortium shall—

(A) be composed of no fewer than 2 qualifying entities; and

(B) operate subject to an 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) a plan for managing intellectual property rights; and

(v) an accounting structure that enables the Secretary to ensure that the consortium has complied with the requirements of this section.

(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 awards for the establishment and operation of Hubs through competitive selection processes. 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. Awards made to a Hub shall be for a period not to exceed 5 years, subject to the availability of appropriations, after which the award may be renewed, subject to a rigorous merit review. A Hub already in existence on the date of enactment of this Act may continue to receive support for a period of 5 years, subject to the availability of appropriations, beginning on the date of establishment of that Hub.

(d) HUB OPERATIONS.—

(1) IN GENERAL.—Each Hub shall conduct or provide for multidisciplinary, collaborative research, development, and demonstration of advanced energy technologies within the technology development focus designated 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, and describing each project undertaken by the Hub; and

(D) monitor project implementation and coordination.

(2) CONFLICTS OF INTEREST.—

(A) PROCEDURES.—Hubs shall maintain 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 decision-making capacities disclose all material conflicts of interest, and avoid such conflicts.

(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).

(3) PROHIBITION ON CONSTRUCTION.—

(A) 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.

(B) 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 research or for the construction of a test bed or renovations to existing buildings or facilities for the purposes of research if the Secretary determines that the test bed or renovations are limited to a scope and scale necessary for the research to be conducted.

(e) TERMINATION.—Consistent with the existing authorities of the Department, the Secretary may terminate an underperforming Hub for cause during the performance period.

(f) DEFINITIONS.—For purposes of this section:

(1) ADVANCED ENERGY TECHNOLOGY.—The term ''advanced energy technology'' means—

(A) an innovative technology—

(i) that produces energy from solar, wind, geothermal, biomass, tidal, wave, ocean, or other renewable energy resources;

(ii) that produces nuclear energy;

(iii) for carbon capture and sequestration;

(iv) that enables advanced vehicles, vehicle components, and related technologies that result in significant energy savings;

(v) that generates, transmits, distributes, utilizes, or stores energy more efficiently than conventional technologies, including through Smart Grid technologies; or

(vi) 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;

(B) research, development, and demonstration activities necessary to ensure the long-term, secure, and sustainable supply of energy critical elements; or

(C) another innovative energy technology area identified by the Secretary.

(2) HUB.—The term ''Hub'' means an Energy Innovation Hub established or operating in accordance with this section, including any Energy Innovation Hub existing as of the date of enactment of this Act.

(3) 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.

The Acting CHAIR. Pursuant to House Resolution 271, the gentleman from Florida (Mr. GRAYSON) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Florida.

Mr. GRAYSON. Mr. Chair, this amendment seeks to authorize the Energy Innovation Hubs program within the Department of Energy.

I would like to thank Chairman SMITH and his staff for working with me to craft this amendment. Because I know that the chairman supports the amendment, I will keep my remarks brief.

Energy Innovation Hubs are collaborative research centers that bring together teams of scientists and engineers from academia, industry, and national laboratories in order to accelerate scientific discoveries that address critical energy issues. They were created in 2010 and have received almost $500 million in funding already.

The four hubs currently focus on everything from improving nuclear reactors through computer-based modeling to improving battery technology for transportation and the grid.

The amendment before us would not only authorize this important research but would also provide critical guidelines and accountability measures for the program.

A rigorous merits-based renewal process would be implemented. The Secretary would be empowered to terminate underperforming hubs at any time, and funds would be prohibited from being used for the purpose of constructing buildings so that every taxpayer dollar goes toward the research for which it is intended.

Again, I thank the gentleman from Texas, Chairman SMITH, for his help and guidance in developing this amendment. I urge my colleagues to support it.

I reserve the balance of my time.

Mr. SMITH of Texas. Mr. Chairman, I claim the time in opposition to the amendment, though I do not oppose the amendment.

The Acting CHAIR. The gentleman is recognized for 5 minutes.

Mr. SMITH of Texas. Mr. Chairman, this amendment would authorize the Department of Energy Innovation Hubs. These integrated research platforms conduct fundamental research to address critical challenges in energy technology.

Currently, DOE operates four hubs, which all focus on the critical energy issues. They include the Consortium for Advanced Simulation of Light Water Reactors, which uses high performance computation modeling to simulate and improve reactors. And it includes the Joint Center for Energy Storage Research, which focuses on developing the next generation of battery technologies.

My thanks go to the gentleman from Florida (Mr. GRAYSON), a very active and alert member of the Science, Space, and Technology Committee, for offering this amendment and for working with us to develop this bipartisan amendment. I encourage Members to support it.

I reserve the balance of my time.

Mr. GRAYSON. I yield back the balance of my time.

Mr. SMITH of Texas. I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentleman from Florida (Mr. GRAYSON).

The amendment was agreed to.

AMENDMENT NO. 10 OFFERED BY MS. BONAMICI

The Acting CHAIR. It is now in order to consider amendment No. 10 printed in part A of House Report 114–120.

Ms. BONAMICI. 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:

Page 162, lines 3 through 5, strike subsection (d).

The Acting CHAIR. Pursuant to House Resolution 271, the gentlewoman from Oregon (Ms. BONAMICI) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentlewoman from Oregon.

Ms. BONAMICI. Mr. Chairman, I yield myself such time as I may consume.

Mr. Chairman, I rise today to address an issue of national security.

The Department of Defense is the world's largest institutional consumer of fuel. As a result, the volatility of oil prices directly affects military readiness. Every $10 increase on a barrel of oil costs the Department of Defense an additional $1.3 billion a year.

To reduce our military's and our Nation's dependence on a single source of fuel, the Departments of Defense, Energy, and Agriculture have been working closely over the past 4 years with the private sector to scale up an advanced ''drop-in'' biofuel production capability.

One of those projects is in Lakeview, Oregon, where a forest biomass plant will produce fuel for the U.S. Navy and Marines. It is one of three companies selected by the Departments of Defense, Energy, and Agriculture to produce cost-competitive drop-in military biofuels. Once at scale, these biorefineries will have a combined capacity to produce 100 million gallons of fuel for military ships and planes while reducing their greenhouse gas emissions by 50 percent compared to conventional fuels.

Our military and Nation are faced with a growing global demand for energy. We need to have a greater emphasis on renewable energy and energy-efficient technologies. Yet, without any apparent logic, this bill would prohibit the Department of Energy—the lead agency with deep, technical expertise in this area—from partnering with the Department of Defense to develop biofuels.

The amendment that I am offering strikes this prohibition and would allow the Departments of Energy and Defense to continue their efforts to learn from each other's expertise.

Mr. Chairman, I will introduce into the RECORD a letter opposing the prohibition from the Truman National Security Project, where they note—these are retired military—that 4 years of partnership between the Departments of Defense, Energy, and Agriculture have seen impressive progress in the development of advanced drop-in biofuels that will allow the military to turn away from an outdated fuel source. Members of the military from every rank and service have spoken out in favor of the continued investment in biofuels for the reasons of cost and capability.

OPERATION FREE,
April 21, 2015.

Hon. LAMAR SMITH,
Hon. EDDIE BERNICE JOHNSON,
House Committee on Science, Space, and Technology, Washington, DC.

DEAR CHAIRMAN SMITH AND RANKING MEMBER JOHNSON: The American military is the greatest fighting force the world has ever seen. The United States Congress has the critical responsibility of empowering our military leaders by equipping that force with the tools they need to engage effectively in a world of ever-increasing security threats. Accordingly, we urge you to withdraw the America COMPETES Reauthorization Act of 2015, which would bar the Department of Energy from continuing a four-year collaboration with the Departments of Defense and Agriculture to develop cost-effective advanced biofuels.

Time and again throughout our history, the military has chosen to innovate towards new solutions. While the advances resulting from these efforts have often benefited our nation as a whole, they are undertaken not for the sake of novelty or adventure but to fill a key operational or tactical need. Advanced biofuels fills such a need: Reducing the dangerous dependence of the U.S. military on fossil fuels.

The Department of Defense is the world's largest institutional consumer of fuel. With approximately $15 billion per year budgeted simply to maintain freedom of movement, the U.S. military is dangerously sensitive to the volatility of oil prices; a $10 change in the price per barrel of crude oil leaves the Department of Defense with a $1.3 billion shortfall and sees increased profits to countries who oppose our interests around the world. And because oil is priced in a global market, no amount of domestic production can insulate the military from these effects.

We have learned firsthand that oil truly is the Achilles' heel of our military. With most

of the world's oil traveling through two or three major chokepoints, the military must allocate significant manpower and resources to keeping those sea lanes open and secure. Moreover, as the military transitions from large-scale land engagements in the Middle East and towards a broader engagement in the Asia-Pacific, the costs and logistical challenges associated with moving fuel over thousands of miles of ocean will only increase.

The threat of oil dependence along with the need for energy security isn't going away any time soon. And we shouldn't impede progress of alternatives that are moving forward now. Four years of partnership between the Departments of Defense, Energy, and Agriculture have seen impressive progress in the development of advanced, ''drop in'' biofuels that will allow the military to turn away from an outdated fuel source. Top line military platforms as diverse as the supersonic F/A–18 ''Green Hornet,'' the Air Force's F16 fighter jets, the MH–60S Seahawk helicopter, the AV–8B Harrier, the Fire Scout unmanned vehicle, the Riverine Command Boat (RCB-X) and the frigate USS Ford have all operated at full capacity and with no averse side effects using American-made biofuels.

Members of the military from every rank and service have spoken out in favor of the continued investment in biofuels for reasons of cost and capabilities alike. These voices, rather than political leanings or parochial interests, must steer national security policy. Accordingly, we urge you to withdraw the America COMPETES Reauthorization Act of 2015 and to ensure that the U.S. military is free to pursue the fuel sources its leaders deign necessary for maximum operational and tactical success.

Respectfully,

MICHAEL BREEN,
Executive Director, Truman National Security Project Army Captain (Fmr.).
RADM LEENDERT ''LEN'' HERING,
USN (Ret.).
LT GEN NORMAN SEIP,
USAF (Ret.).

Ms. BONAMICI. I urge adoption of the amendment, and I reserve the balance of my time.

Mr. SMITH of Texas. Mr. Chairman, I claim the time in opposition to the amendment.

The Acting CHAIR. The gentleman is recognized for 5 minutes.

Mr. SMITH of Texas. I yield 4 minutes to the gentleman from Texas (Mr. WEBER), who is the chairman of the Energy Subcommittee of the Science, Space, and Technology Committee.

Mr. WEBER of Texas. I thank the gentleman from Texas for yielding to me.

Mr. Chair, I rise today in opposition to the gentlewoman's amendment and in support of the underlying reforms included in H.R. 1806, the America COMPETES Reauthorization Act of 2015.

This amendment would remove a limitation included in the underlying bill that prevents the Department of Energy from using funding authorized for the EERE Biofuels program to conduct commercial production of biofuels for defense purposes.

The fact is that EERE already spends too much of their current budget on deployment and commercialization of renewable and energy efficient technologies instead of research and development.

The DOE's ongoing effort to fund commercial-scale biofuels production for military purposes in cooperation with the Department of Defense and USDA is just one example.

Redirecting funds from biofuels R&D is part of a broader problem. Department of Energy research and development programs should be focused on science, not creating a market for certain types of fuels. The DOE should focus on a new idea for the market, not a market for the new idea.

The Department of Defense spends billions annually on fuel costs, billions. When viable biofuels technology is able to compete with conventional fuels—trust me—the private sector can and will develop commercial-scale biofuels production to meet demand. It is just that simple, Mr. Chairman.

And despite significant Federal programs to support the use of biofuels, a recent GAO, Government Accountability Office, study concluded that the long-term viability of alternative fuels is dependent on market factors, not Federal funds or mandates. That same study reported that the Department of Defense paid $150 per gallon for 1,500 gallons of alternative jet fuel derived from algal oil. Taxpayers should be outraged.

The other side may be, in fact, promoting their global warming theory because when taxpayers find out about this kind of waste, there are going to be a lot of them hot under the collar.

The Department of Energy should focus on research and development, not commercial biofuels production. This limitation is consistent with the broader goals of the America COMPETES Reauthorization Act, which prioritizes research and development in all R&D program areas while cutting spending on deployment and commercialization.

I am aghast, Mr. Chairman, that the other side somehow thinks Congress shouldn't be paying attention to the way taxpayer dollars are spent.

For these reasons, I encourage my colleagues to vote ''no'' on this amendment.

Ms. BONAMICI. Mr. Chair, may I please inquire as to the amount of time remaining.

The Acting CHAIR. The gentlewoman from Oregon has 2½ minutes remaining.

Ms. BONAMICI. I yield 2 minutes to the gentleman from California (Mr. PETERS), a member of the Science, Space, and Technology Committee.

Mr. PETERS. I thank the gentlewoman for yielding.

Mr. Chairman, I rise as a cosponsor of this amendment, and I am glad to be working with Congresswoman BONAMICI and my colleague on the Armed Services Committee, Ranking Member ADAM SMITH.

Our amendment simply allows the Department of Energy to continue its collaborative work with the Department of Defense to produce biofuels for the military.

The Department of Defense is the single largest institutional consumer of fuel in the world, and this is all about saving money because our military spends about $20 billion a year on energy, $16 billion of which goes to oil fuels.

As we have seen in recent years, global oil markets are volatile. And despite massive production increases in the United States, according to the Energy Information Administration, last year, our net imports of petroleum were 5 million barrels per day, with our top five suppliers being Canada, Saudi Arabia, Mexico, Venezuela, and Iraq. That reliance on a volatile, foreign-produced source of fuel puts our national security at risk, particularly when we face dynamic, new threats from nonstate actors such as ISIS, al Qaeda, or individual terrorists who can disrupt oil production and supply lines in new and intimidating ways.

The constraints of depending so heavily on a single source of fuel also puts our readiness at risk, a problem that will only increase as we are forced to respond to international incidents across the globe at a moment's notice and as our military makes its strategic pivot toward the vast Pacific Ocean.

Instead of standing idly by and waiting for a fuel-supply crisis that would endanger our ability to confront those wanting to harm our country, the Departments of Defense, Energy, and Agriculture have been working with private sector innovators to develop renewable biofuels that could be used by planes, tactical vehicles, and ships.

The Navy already has innovative partnerships with algae producers and their high-skilled workers in my district in San Diego.

Congress should be laying the groundwork for more strategic public-private partnerships to develop like those in San Diego, not mandating that they cannot exist.

The military is not pursuing this fuel supply diversity because they are tree-hugging environmentalists but because it is a national security imperative.

Foolishly, today's COMPETES Act would bar the Department of Defense from working with the Department of Energy on developing biofuels. Why would we undercut an effort that our military commanders are for and say will save lives?

□ 1730

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

Ms. BONAMICI. Mr. Chairman, I yield 30 seconds to the gentleman from Virginia (Mr. BEYER), a member of the Science, Space, and Technology Committee.

Mr. BEYER. Mr. Chairman, I thank my dear friend, Ms. BONAMICI, for yielding and for her leadership on this important issue.

Mr. Chair, I rise in strong support of this commonsense amendment to allow

the Department of Energy and the Department of Defense to continue working together to develop biofuel options for our Nation's military.

DOD's reliance on a single source of fuel deepens dependence on foreign oil, threatens our national security, and contributes significantly to spending. Why would we not want the Department of Energy with their deep technical expertise in this area to assist DOD to create alternatives for petroleum-based fuels? It makes no sense, and I urge my colleagues' support.

Ms. BONAMICI. Mr. Chairman, I yield back the balance of my time.

Mr. SMITH of Texas. Mr. Chairman, in closing, the gentlewoman's amendment would remove an important limitation from the underlying bill that prevents the Department of Energy from spending research dollars to fund commercial-scale biofuels development for defense purposes. DOE should focus on innovative research and development, not commercial production of any particular form of energy.

For those reasons, Mr. Chairman, I encourage Members to oppose this amendment, and I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentlewoman from Oregon (Ms. BONAMICI).

The question was taken; and the Acting Chair announced that the noes appeared to have it.

Ms. BONAMICI. 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 gentlewoman from Oregon will be postponed.

AMENDMENT NO. 11 OFFERED BY MR. BEYER

The Acting CHAIR. It is now in order to consider amendment No. 11 printed in part A of House Report 114–120.

Mr. BEYER. Mr. Chairman, I have an amendment at the desk for Mr. DESAULNIER and myself.

The Acting CHAIR. The Clerk will designate the amendment.

The text of the amendment is as follows:

Page 174, lines 18 through 24, strike paragraph (1).

The Acting CHAIR. Pursuant to House Resolution 271, the gentleman from Virginia (Mr. BEYER) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Virginia.

Mr. BEYER. Mr. Chairman, I yield myself such time as I may consume.

Mr. Chairman, I am proud to speak in support of our amendment, which would restore the ARPA-E goal of developing energy technologies that result in reductions in energy-related emissions, including greenhouse gases. I believe this is an important and urgent area of research and that it should remain explicitly stated in the statute as a goal for ARPA-E.

When I look at the existing statute, it says:

The goals of ARPA-E shall be reductions of imports of energy from foreign sources; reductions of energy-related emissions, including greenhouses gases; and improvement in the energy efficiency of all economic sectors.

These are the three goals which have been removed from the current bill. Global carbon dioxide concentrations have risen more than 120 parts per million since preindustrial times, half of that arrived just since 1980. The burning of coal, oil, and natural gas is driving the acceleration of greenhouse gas concentrations in our atmosphere. Just 2 weeks ago, NOAA reported that the monthly global average of concentration of carbon dioxide has surpassed 400 parts per million. The last time this happened was over 1 million years ago.

We must look to develop alternative energy sources that will reduce man-made emissions. ARPA-E is a unique agency that can help us with this mission. Since 2009, it has funded over 400 potentially transformational energy technology projects. A number of these projects have spurred follow-on private sector funding, and a number of ARPA-E awardees have formed startup companies or partnered with other parts of the government and industry to advance their technologies.

Reducing energy-related emissions, including greenhouse gases, is an important component to our Nation's economic and energy security. Therefore, Mr. Chairman, I urge my colleagues to support our amendment to reinstate these three goals for ARPA-E, and I reserve the balance of my time.

Mr. SMITH of Texas. Mr. Chairman, I rise in opposition to the amendment.

The Acting CHAIR. The gentleman is recognized for 5 minutes.

Mr. SMITH of Texas. Mr. Chairman, I yield such time as he may consume to the gentleman from Georgia (Mr. LOUDERMILK), who is also the chairman of the Oversight Subcommittee of the Science, Space, and Technology Committee.

Mr. LOUDERMILK. Mr. Chairman, I rise to oppose this amendment to H.R. 1806 because I support research that will enhance both the economic security and the energy security of the United States.

The original America COMPETES Act, which established the Advanced Research Projects Agency within the Department of Energy, ARPA-E, required the agency to only pursue projects that reduce greenhouse gases. The bill before us today, the America COMPETES Reauthorization Act, allows any advanced energy technology that could enhance U.S. economic and energy security to compete for ARPA-E funding. This levels the playing field and ensures that ARPA-E funds research with the greatest potential to have a positive impact on the American economy.

The COMPETES Act provides a balanced approach to ARPA-E by reprioritizing funding towards innovative projects that are truly in need of Federal research dollars. The bill also removes restrictions that allow the administration to play favorites in the energy sector. However, this amendment would strike the language which expands the ARPA-E project eligibility. As a result, this amendment would then limit innovative research and development.

With all of the national security challenges we face today, from terrorism, to cybersecurity breaches, to our skyrocketing national debt, we should focus our attention on broadening our energy base and achieving energy independence, not limiting ourselves to one small area of environmental science. I believe we must adopt an all-of-the-above energy strategy that improves our energy security and emphasizes all energy opportunities, including those which reduce greenhouse gases.

Congress should not put in place arbitrary limits on innovation that will prevent groundbreaking technologies from across the energy sector from participating in ARPA-E programs. I urge my colleagues to oppose this amendment.

Mr. BEYER. Mr. Chair, I yield 1 minute to the gentlewoman from Texas (Ms. EDDIE BERNICE JOHNSON), the ranking member of the Science, Space, and Technology Committee.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I thank the gentleman for yielding.

Mr. Chairman, it is deeply troubling to me that this amendment had to be offered. This amendment fixes a provision in this bill that strips away a foundational component of the ARPA-E program.

As virtually every preeminent climatologist in the world agrees, greenhouse gas emissions are growing so rapidly and are a growing threat to our way of life. Why wouldn't we want one of the most innovative agencies to develop technologies that could address this critical issue?

ARPA-E has made good funding choices supporting valuable research, as proven by its impressive track record of successful projects since it was first authorized. I certainly see no value in changing something that no serious energy policy analyst believes is broken.

Mr. DESAULNIER's and Mr. BEYER's amendment sets this clearly misguided provision aside. I enthusiastically support it and urge my colleagues to do so as well.

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

Mr. BEYER. Mr. Chairman, I yield myself such time as I may consume.

Mr. Chairman, I listened with great interest to the rebuttal of the alternative argument from my friend, Mr. LOUDERMILK, and I found myself agreeing with almost everything that he said, but misunderstanding why retaining these three goals somehow played favorites, how they created arbitrary limits on innovation, and how they opposed efforts to find our economic and

energy security. The purpose of the amendment is to recognize that reducing dependence on foreign oil, that trying to find ways to limit greenhouse gases, and improving the energy efficiency of all economic sectors are worthy goals.

Perhaps what we need to do is add a fourth one, which I would be happy to place first if the chairman would agree, that says the goals will be, first, to develop any breakthroughs in innovation that help the economic and energy security of the Nation so that there is no playing of favorites and there are no arbitrary limitations. If we could work that out, that would be great. Otherwise, Mr. Chairman, I urge my colleagues to support the amendment as offered, and I yield back the balance of my time.

Mr. SMITH of Texas. Mr. Chairman, the gentleman's amendment would remove key policy reforms to ARPA-E from the COMPETES bill and instead place limitations on the research and development conducted at ARPA-E. Federally funded research should include innovative technologies for all forms of energy, not just the President's personal preferences. So I encourage Members to oppose the amendment.

I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentleman from Virginia (Mr. BEYER).

The question was taken; and the Acting Chair announced that the noes appeared to have it.

Mr. BEYER. 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 Virginia will be postponed.

AMENDMENT NO. 12 OFFERED BY MS. EDDIE BERNICE JOHNSON OF TEXAS

The Acting CHAIR. It is now in order to consider amendment No. 12 printed in part A of House Report 114–120.

Ms. EDDIE BERNICE JOHNSON of Texas. 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:

Strike all after the enacting clause and insert the following:

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the ''America Competes Reauthorization Act of 2015''.

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

Sec. 1. Short title; table of contents.

TITLE I—OSTP; GOVERNMENTWIDE SCIENCE

Subtitle A—General Provisions

Sec. 101. Federal research and development funding.
Sec. 102. National Science and Technology Council amendments.
Sec. 103. Review of Federal regulations and reporting requirements.
Sec. 104. Amendments to prize competitions.
Sec. 105. Coordination of international science and technology partnerships.
Sec. 106. Scientific and technical conferences.

Subtitle B—Reauthorization of the National Nanotechnology Initiative

Sec. 111. Short title.
Sec. 112. National Nanotechnology Program amendments.
Sec. 113. Societal dimensions of nanotechnology.
Sec. 114. Nanotechnology education.
Sec. 115. Technology transfer.
Sec. 116. Signature initiatives in areas of national importance.
Sec. 117. Nanomanufacturing research.
Sec. 118. Definitions.

Subtitle C—Engineering Biology

Sec. 121. Short title.
Sec. 122. Findings.
Sec. 123. Definitions.
Sec. 124. National Engineering Biology Research and Development Program.
Sec. 125. Advisory Committee.
Sec. 126. External review of ethical, legal, environmental, and societal issues.
Sec. 127. Agency activities.

TITLE II—STEM EDUCATION AND DIVERSITY

Subtitle A—STEM Education and Workforce

Sec. 201. Sense of Congress.
Sec. 202. Coordination of Federal STEM education.
Sec. 203. Grand challenges in education research.
Sec. 204. National Research Council report on STEAM education.
Sec. 205. Engaging Federal scientists and engineers in STEM education.

Subtitle B—Broadening Participation in STEM

Sec. 211. Short title.
Sec. 212. Purpose.
Sec. 213. Federal science agency policies for caregivers.
Sec. 214. Collection and reporting of data on Federal research grants.
Sec. 215. Policies for review of Federal research grants.
Sec. 216. Collection of data on demographics of faculty.
Sec. 217. Cultural and institutional barriers to expanding the academic and Federal STEM workforce.
Sec. 218. Research and dissemination at the National Science Foundation.
Sec. 219. Report to Congress.
Sec. 220. National Science Foundation support for increasing diversity among STEM faculty at institutions of higher education.
Sec. 221. National Science Foundation support for broadening participation in undergraduate STEM education.
Sec. 222. Definitions.

TITLE III—NATIONAL SCIENCE FOUNDATION

Subtitle A—General Provisions

Sec. 301. Authorization of appropriations.
Sec. 302. Findings and sense of Congress on support for all fields of science and engineering.
Sec. 303. National Science Foundation merit review.
Sec. 304. Management and oversight of large facilities.
Sec. 305. Support for potentially transformative research.
Sec. 306. Strengthening institutional research partnerships.
Sec. 307. Innovation Corps.
Sec. 308. Definitions.

Subtitle B—STEM Education

Sec. 321. National Science Board report on consolidation of STEM education activities at the Foundation.
Sec. 322. Models for graduate student support.
Sec. 323. Undergraduate STEM education reform.
Sec. 324. Advanced manufacturing education.
Sec. 325. STEM education partnerships.
Sec. 326. Noyce scholarship program amendments.
Sec. 327. Informal STEM education.
Sec. 328. Research and development to support improved K–12 learning.

TITLE IV—NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

Sec. 401. Short title.
Sec. 402. Authorization of appropriations.
Sec. 403. Hollings Manufacturing Extension Partnership.
Sec. 404. National Academies review.
Sec. 405. Improving NIST collaboration with other agencies.
Sec. 406. Miscellaneous provisions.

TITLE V—INNOVATION

Sec. 501. Office of Innovation and Entrepreneurship.
Sec. 502. Federal loan guarantees for innovative technologies in manufacturing.
Sec. 503. Innovation voucher pilot program.
Sec. 504. Federal Acceleration of State Technology Commercialization Pilot 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.
Sec. 606. Advanced scientific computing research program.
Sec. 607. Fusion energy research.
Sec. 608. High energy physics program.
Sec. 609. Nuclear physics program.
Sec. 610. Science laboratories infrastructure program.
Sec. 611. Authorization of appropriations.

Subtitle B—ARPA–E

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

Subtitle C—Energy Innovation

Sec. 641. Energy Innovation Hubs.
Sec. 642. Participation in the Innovation Corps program.
Sec. 643. Technology transfer.
Sec. 644. Funding competitiveness for institutions of higher education and other nonprofit institutions.
Sec. 645. Under Secretary for Science and Energy.
Sec. 646. Special hiring authority for scientific, engineering, and project management personnel.

TITLE I—OSTP; GOVERNMENTWIDE SCIENCE

Subtitle A—General Provisions

SEC. 101. FEDERAL RESEARCH AND DEVELOPMENT FUNDING.

Congress finds the following:

(1) The predominant driver of gross domestic product growth over the past half century has been scientific and technological advancement.

(2) Investments in research and development have also delivered significant benefits for national security, health, energy security, education, and the personal well-being of all Americans.

(3) Virtually every new technological product is traceable to a research discovery, often one pursued with no application in mind.

(4) Nondefense Federal research and development accounts for only 1.7 percent of the

Federal budget. Federal basic research accounts for only 1 percent of the budget.

(5) There is a deficit between what America is investing and what it should be investing to remain competitive, not only in research but in technology transfer, innovation, and job creation, thereby causing America's highly successful science and technology enterprise to atrophy.

(6) Many research and development initiatives, due to the long time periods required to achieve completion, have benefited from stable and predictable investments and from multiyear financial planning.

(7) The Federal science agencies should receive sustained and steady growth in funding for research and development activities, including basic research, across a wide range of disciplines, including physical, geological, and life sciences, mathematics, engineering, and social, behavioral, and economic sciences.

SEC. 102. NATIONAL SCIENCE AND TECHNOLOGY COUNCIL AMENDMENTS.

Section 401 of the National Science and Technology Policy, Organization, and Priorities Act of 1977 (42 U.S.C. 6651) is amended—

(1) in subsection (a), by striking ''Federal Coordinating Council for Science, Engineering, and Technology'' and inserting ''National Science and Technology Council'';

(2) in subsection (b), by striking ''and Energy Research and Development Administration'' and inserting ''Department of Energy, and any other agency designated by the President''; and

(3) in subsection (e)—

(A) by striking ''engineering, and technology'' and inserting ''engineering, technology, innovation, and STEM education'';

(B) in paragraph (1), by striking ''engineering, and technological'' and inserting ''engineering, technological, innovation, and STEM education'';

(C) by redesignating paragraphs (3) and (4) as paragraphs (4) and (5), respectively; and

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

''(3) address research needs identified under paragraph (2) through appropriate funding mechanisms, which may include solicitations involving 2 or more agencies and public-private partnerships;''.

SEC. 103. REVIEW OF FEDERAL REGULATIONS AND REPORTING REQUIREMENTS.

(a) ESTABLISHMENT.—The Director of the Office of Science and Technology Policy shall establish or designate a working group under the National Science and Technology Council with the responsibility of reviewing Federal regulatory and reporting requirements across Federal agencies that affect the conduct of United States research in an effort to reduce regulatory burdens and to eliminate and harmonize duplicative regulatory and reporting requirements.

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

(1) periodically review all Federal regulations and reporting requirements that affect the conduct of United States research to—

(A) identify ways to harmonize overlapping or duplicative research regulations and reporting requirements across Federal agencies;

(B) evaluate such regulations and reporting requirements in relationship to the risks the requirements seek to address to determine if the benefits of the requirements are commensurate with the costs to the progress of science or to the taxpayer;

(C) identify any regulations that are applied to scientific researchers or to research-performing institutions for which exemptions could be reasonably applied or for which adjustments could be made to better fit those regulations to diverse research environments; and

(D) identify any specific regulations which could be refocused on performance-based goals rather than on process while still meeting the desired outcome;

(2) examine the extent to which agencies' guidance documents adhere with the most recently updated version of the Office of Management and Budget's Agency Good Guidance Practices bulletin; and

(3) develop and update at least once every 3 years a strategic plan for streamlining Federal regulations and reporting requirements that affect the conduct of United States research that contains, at a minimum—

(A) a priority list of research-related regulations, reporting requirements, and agency guidance to be harmonized, streamlined, updated, or eliminated; and

(B) a plan, including a timeline, for implementing the regulatory and reporting reforms identified in subparagraph (A).

(c) STAKEHOLDER INPUT.—In carrying out the responsibilities under subsection (b), including the development of the strategic plan under subsection (b)(3), the working group established or designated under subsection (a) shall take into account input and recommendations from non-Federal stakeholders, including federally funded and non-federally funded researchers, institutions of higher education, scientific disciplinary societies and associations, nonprofit research institutions, industry, including small businesses, federally funded research and development centers, and others with a stake in ensuring effectiveness, efficiency, and accountability in the performance of scientific research.

(d) RESPONSIBILITIES OF OSTP.—The Director of the Office of Science and Technology Policy, in collaboration with the Office of Management and Budget Office of Information and Regulatory Affairs, shall encourage and monitor the efforts of the participating agencies to ensure that the strategic plan is developed under subsection (b)(3) and that appropriate steps are taken by the agencies to effectively implement the recommendations, achieve the objectives, and to adhere to the timeline in the strategic plan.

(e) REPORT.—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 priority list and strategic plan developed under subsection (b)(3) to the Congress. The Director shall further provide a report annually to the Congress, to be submitted not later than 60 days after the submission of the President's annual budget request, on the progress toward implementation of the regulatory reforms outlined in the strategic plan.

SEC. 104. AMENDMENTS TO PRIZE COMPETITIONS.

Section 24 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3719) is amended—

(1) in subsection (c)—

(A) by inserting ''competition'' after ''section, a prize'';

(B) by inserting ''types'' after ''following''; and

(C) in paragraph (4), by striking ''prizes'' and inserting ''prize competitions'';

(2) in subsection (f)—

(A) by striking ''in the Federal Register'' and inserting ''on a publicly accessible Government website, such as www.challenge.gov,''; and

(B) in paragraph (4), by striking ''prize'' and inserting ''cash prize purse'';

(3) in subsection (g), by striking ''prize'' and inserting ''cash prize purse'';

(4) in subsection (h), by inserting ''prize'' before ''competition'' both places it appears;

(5) in subsection (i)—

(A) in paragraph (1)(B), by inserting ''prize'' before ''competition'';

(B) in paragraph (2)(A), by inserting ''prize'' before ''competition'' both places it appears;

(C) by redesignating paragraph (3) as paragraph (4); and

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

''(3) WAIVER.—An agency may waive the requirement under paragraph (2). The annual report under subsection (p) shall include a list of such waivers granted during the preceding fiscal year, along with an explanation of the reasons for granting the waivers.'';

(6) in subsection (j) by amending paragraph (2) to read as follows:

''(2) INTELLECTUAL PROPERTY.—

''(A) LICENSES.—The Federal Government may negotiate a license for the use of intellectual property developed by a participant for a prize competition.

''(B) OTHER CONDITIONS.—A Federal agency or agencies in cooperation may require participants to agree in advance to a specific approach to intellectual property as a condition for eligibility to participate in a prize competition.'';

(7) in subsection (k)—

(A) in paragraph (2)(A), by inserting ''prize'' before ''competition''; and

(B) in paragraph (3), by inserting ''prize'' before ''competitions'' both places it appears;

(8) in subsection (l), by striking all after ''may enter into'' and inserting ''a grant, contract, cooperative agreement, or other agreement with a private sector for-profit or nonprofit entity to administer the prize competition, subject to the provisions of this section.'';

(9) in subsection (m)—

(A) by amending paragraph (1) to read as follows:

''(1) IN GENERAL.—Support for a prize competition under this section, including financial support for the design and administration of a prize competition or funds for a cash prize purse, may consist of Federal appropriated funds and funds provided by private sector for-profit and nonprofit entities. The head of an agency may accept funds from other Federal agencies, private sector for-profit entities, and nonprofit entities, to be available to the extent provided by appropriations Acts, to support such prize competitions. The head of an agency may not give any special consideration to any private sector for-profit or nonprofit entity in return for a donation.'';

(B) in paragraph (2), by striking ''prize awards'' and inserting ''cash prize purses'';

(C) in paragraph (3)(A)—

(i) by striking ''No prize'' and inserting ''No prize competition''; and

(ii) by striking ''the prize'' and inserting ''the cash prize purse'';

(D) in paragraph (3)(B), by striking ''a prize'' and inserting ''a cash prize purse'';

(E) in paragraph (3)(B)(i), by inserting ''competition'' after ''prize'';

(F) in paragraph (4)(A), by striking ''a prize'' and inserting ''a cash prize purse''; and

(G) in paragraph (4)(B), by striking ''cash prizes'' and inserting ''cash prize purses'';

(10) in subsection (n), by inserting ''for both for-profit and nonprofit entities,'' after ''contract vehicle'';

(11) in subsection (o)(1), by striking ''or providing a prize'' and insert ''a prize competition or providing a cash prize purse''; and

(12) in subsection (p)—

(A) in the heading, by striking ''ANNUAL REPORT'' and inserting ''BIENNIAL REPORT'';

(B) in paragraph (1)—

(i) by striking ''of each year'' and inserting ''of each odd-numbered year''; and

(ii) by striking ''preceding fiscal year'' and inserting ''preceding 2 fiscal years''; and

(C) in paragraph (2)—

(i) in subparagraph (C), by striking ''cash prizes'' both places it occurs and inserting ''cash prize purses''; and

(ii) by adding at the end the following new subparagraph:

''(G) PLAN.—A description of crosscutting topical areas and agency-specific mission needs that may be the strongest opportunities for prize competitions during the upcoming 2 fiscal years.''.

SEC. 105. COORDINATION OF INTERNATIONAL SCIENCE AND TECHNOLOGY PARTNERSHIPS.

(a) SHORT TITLE.—This section may be cited as the ''International Science and Technology Cooperation Act of 2015''.

(b) ESTABLISHMENT.—The Director of the Office of Science and Technology Policy shall establish a body under the National Science and Technology Council (NSTC) with the responsibility to identify and coordinate international science and technology cooperation that can strengthen the United States science and technology enterprise, improve economic and national security, and support United States foreign policy goals.

(c) NSTC BODY LEADERSHIP.—The body established under subsection (b) shall be cochaired by senior level officials from the Office of Science and Technology Policy and the Department of State.

(d) RESPONSIBILITIES.—The body established under subsection (b) shall—

(1) plan and coordinate interagency international science and technology cooperative research and training activities and partnerships supported or managed by Federal agencies and work with other National Science and Technology Council committees to help plan and coordinate the international component of national science and technology priorities;

(2) establish Federal priorities and policies for aligning, as appropriate, international science and technology cooperative research and training activities and partnerships supported or managed by Federal agencies with the foreign policy goals of the United States;

(3) identify opportunities for new international science and technology cooperative research and training partnerships that advance both the science and technology and the foreign policy priorities of the United States;

(4) in carrying out paragraph (3), solicit input and recommendations from non-Federal science and technology stakeholders, including universities, scientific and professional societies, industry, and relevant organizations and institutions; and

(5) identify broad issues that influence the ability of United States scientists and engineers to collaborate with foreign counterparts, including barriers to collaboration and access to scientific information.

(e) REPORT TO CONGRESS.—The Director of the Office of Science and Technology Policy shall transmit a report, to be updated annually, to the Committee on Science, Space, and Technology and the Committee on Foreign Affairs of the House of Representatives, and to the Committee on Commerce, Science, and Transportation and the Committee on Foreign Relations of the Senate. The report shall also be made available to the public on the reporting agency's website. The report shall contain a description of—

(1) the priorities and policies established under subsection (d)(2);

(2) the ongoing and new partnerships established since the last update to the report;

(3) the means by which stakeholder input was received, as well as summary views of stakeholder input; and

(4) the issues influencing the ability of United States scientists and engineers to collaborate with foreign counterparts.

SEC. 106. SCIENTIFIC AND TECHNICAL CONFERENCES.

(a) FINDINGS.—Congress finds the following:

(1) Cooperative research and development activities, including collaboration between domestic and international government, industry, and academic science and engineering organizations, are important to promoting innovation and knowledge creation.

(2) Scientific and technical conferences and trade events support the sharing of information, processes, and data within the scientific and engineering communities.

(3) In hosting and attending scientific and technical conferences and trade events, Federal agencies—

(A) gain greater access to top researchers and to new and potentially transformative ideas;

(B) keep abreast of developments relevant to their respective missions, as is relevant for future program planning;

(C) help disseminate Federal research results;

(D) provide opportunities both for employee professional development and for recruiting new employees;

(E) participate in scientific peer review; and

(F) support the reputation, visibility, and leadership both of the specific agency and of the United States.

(4) For those Federal agencies that provide financial support for external research and development activities, participation in scientific and technical conferences can help ensure that funds are directed toward the most promising ideas, thereby maximizing the Federal investment.

(b) POLICY.—To the extent practicable given budget, security, and other constraints, the National Science Foundation, the National Institute of Standards and Technology, and the Department of Energy, in addition to the National Aeronautics and Space Administration, should support Federal employee and contractor attendance at scientific and technical conferences and trade events as relevant both to employee and contractor duties and to the agency's mission.

(c) OVERSIGHT.—Consistent with other relevant law, the Federal agencies, through appropriate oversight, shall aim to minimize the costs to the Federal Government related to conference and trade event attendance, through methods such as—

(1) ensuring that related fees collected by the Federal agency help offset total costs to the Federal Government;

(2) developing or maintaining procedures for investigating unexpected increases in related costs; and

(3) strengthening policies and training relevant to conference and trade event planning and participation.

Subtitle B—Reauthorization of the National Nanotechnology Initiative

SEC. 111. SHORT TITLE.

This subtitle may be cited as the ''National Nanotechnology Initiative Amendments Act of 2015''.

SEC. 112. NATIONAL NANOTECHNOLOGY PROGRAM AMENDMENTS.

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

(1) in section 2—

(A) in subsection (c), by amending paragraph (4) to read as follows:

''(4) develop, 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 timeframe 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; and

''(B) proposed research in areas of national importance in accordance with the requirements of section 116 of the National Nanotechnology Initiative Amendments Act of 2015;'';

(B) in subsection (d)—

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

(ii) by inserting before paragraph (2), as redesignated by clause (i), the following:

''(1) the Program budget, for the previous fiscal year, for each agency that participates in the Program, and for each program component area;''; and

(iii) by amending paragraph (6), as redesignated by clause (i), to read as follows:

''(6) an assessment of how Federal agencies are implementing the plan described in subsection (c)(7) and a description of the amount of Small Business Innovative Research and Small Business Technology Transfer Research funds supporting the plan.''; and

(C) by adding 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.'';

(2) in section 3—

(A) by amending subsection (b)(1) to read as follows:

''(b) FUNDING.—

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

''(2) PROPORTION.—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).

''(3) EXCEPTION.—The Director of the National Nanotechnology Coordination Office may establish a minimum contribution or other exception to the requirement in paragraph (2) for participating agencies whose share of the total budget for the Program is below a threshold level, to be set by the Director.''; and

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

''(d) PUBLIC INFORMATION.—

''(1) DATABASE.—

''(A) IN GENERAL.—The National Nanotechnology Coordination Office shall develop and maintain a database accessible by the public of projects funded under at least the Environmental, Health, and Safety program component area, or any successor program component area, including, to the extent practicable, a description of each project, its source of funding by agency, and its funding history.

''(B) ORGANIZATION.—Projects shall be grouped by major objective as defined by the research plan required under section 113(b) of the National Nanotechnology Initiative Amendments Act of 2015.

''(2) ACCESSIBLE FACILITIES.—

''(A) IN GENERAL.—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.

''(B) WEBSITES.—The National Nanotechnology Coordination Office shall maintain active web links to the websites for each of these facilities and shall work with each facility supported under the Program to ensure that each facility publishes on its respective website updated information on the terms and conditions for the use of the 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.'';

(3) in section 4—

(A) in subsection (a), by adding at the end the following: ''The co-chairs of the Advisory Panel shall meet the qualifications of Panel membership required in subsection (b) and may be members of the President's Council of Advisors on Science and Technology. The Advisory Panel shall include members having specific qualifications tailored to enable it to carry out the requirements of subsection (c)(6).'';

(B) in subsection (c)—

(i) by striking paragraph (1); and

(ii) by redesignating paragraphs (2) through (7) as paragraphs (1) through (6), respectively; and

(C) by amending subsection (d) to read as follows:

''(d) REPORTS.—The Advisory Panel shall report not less frequently than every 3 years, and, to the extent practicable, 1 year following each of the National Research Council triennial reviews required under section 5, to the President on its assessments under subsection (c) and its recommendations for ways to improve the Program. The Director of the Office of Science and Technology Policy shall transmit a copy of each report under this subsection to the Committee on Commerce, Science, and Transportation of the Senate, the Committee on Science, Space, and Technology of the House of Representatives, and other appropriate committees of the Congress.'';

(4) 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 balance of funding among program component areas, as designated according to section 2(c)(2), is appropriate;

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

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

''(b) PRIORITY REPORTS.—If the Director of the National Nanotechnology Coordination Office, working with the National Research Council and with input from the Advisory Panel, determines that a more narrowly focused review of the Program is in the best interests of the Program, the Director may enter into such an arrangement with the National Research Council in lieu of a full review as required under subsection (a), but not more often than every second triennial review.

''(c) EVALUATION TO BE TRANSMITTED TO CONGRESS.—The National Research Council shall document the results of each triennial review carried out in accordance with this section in a report that includes any recommendations for changes to the Program's objectives, technical content, or other policy or Program changes. 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, Space, and Technology of the House of Representatives.''; and

(5) 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, model, image, 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. 113. SOCIETAL DIMENSIONS OF NANOTECHNOLOGY.

(a) COORDINATOR FOR ENVIRONMENTAL, HEALTH, AND SAFETY RESEARCH.—The Director of the Office of Science and Technology Policy shall designate an associate director of the Office of Science and Technology Policy or other appropriate senior government official as the Coordinator for Environmental, Health, and Safety Research. The Coordinator shall be responsible for oversight of the coordination, planning, and budget prioritization of research and other activities related to environmental, health, safety, and other appropriate societal concerns related to nanotechnology. 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 Advisory Panel established under section 4(a) of the 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7503(a)); and

(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 environmental, health, safety, and other appropriate societal concerns related to nanotechnology are addressed under the Program.

(b) RESEARCH PLAN.—

(1) IN GENERAL.—The Coordinator for Environmental, Health, and Safety Research 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. Such panel may be a subgroup of the Nanoscale Science, Engineering, and Technology Subcommittee of the National Science and Technology Council. In developing and updating the plan, the panel convened by the Coordinator shall solicit and be responsive to recommendations and advice from—

(A) the Advisory Panel established under section 4(a) of the 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7503(a)); 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); and

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

(4) TRANSMITTAL TO CONGRESS.—Not later than 6 months after the date of enactment of this Act, the plan required under paragraph (1) shall be transmitted to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives.

(5) UPDATING AND APPENDING TO REPORT.—The plan required under paragraph (1) shall be updated at least every 3 years and may be submitted as part of the report required under section 2(c)(4) of the 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7501(c)(4)).

SEC. 114. NANOTECHNOLOGY EDUCATION.

(a) UNDERGRADUATE EDUCATION PROGRAMS.—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—

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

(2) faculty professional development; and

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

(b) INTERAGENCY COORDINATION OF EDUCATION.—The Committee established under section 2(c) of the 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7501(c)) shall coordinate, as appropriate, with the Committee established under section 101 of the America COMPETES Reauthorization Act of 2010 (42 U.S.C. 6621)

to prioritize, plan, and assess the educational activities supported under the Program.

(c) 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.

(d) REMOTE ACCESS TO NANOTECHNOLOGY FACILITIES.—

(1) IN GENERAL.—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) PROCEDURES.—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. 115. 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. The agencies may waive this requirement for academic facilities for which the costs of providing such access would be prohibitive.

(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.—

(A) IN GENERAL.—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 the readiness of the project for technology demonstration.

(B) SPECIAL CONSIDERATION.—The agencies may give special consideration in selecting projects to applications that are relevant to important national needs or requirements.

(b) COLLABORATION WITH INDUSTRY.—The Program shall coordinate with industry from all industrial sectors that would benefit from applications of nanotechnology by—

(1) enhancing communication of information related to nanotechnology innovation, including information about research, education and training, manufacturing issues, and market-driven needs;

(2) advancing and accelerating the creation of new products and manufacturing processes derived from discovery at the nanoscale by working with industry, including small and medium-sized manufacturers;

(3) developing innovative methods for transferring nanotechnology products and processes from Federal agencies to industry; and

(4) facilitating industry-led partnerships between the Program and industry sectors, including regional partnerships.

(c) COORDINATION WITH STATE, REGIONAL, AND LOCAL 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 the coordination and leveraging of Federal investments with nanotechnology research, development, and technology transition initiatives supported by the States and regions across the country;''.

SEC. 116. SIGNATURE INITIATIVES IN AREAS OF NATIONAL IMPORTANCE.

(a) IN GENERAL.—The Program shall include support for nanotechnology research and development activities directed toward topical and 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 national challenges. 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) JOINT SOLICITATIONS.—Projects supported under this section shall include projects for which determination of the requirements for applications, 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, agencies may, as appropriate, 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.

SEC. 117. NANOMANUFACTURING RESEARCH.

(a) RESEARCH AREAS.—The Program shall include research on—

(1) the 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 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.

SEC. 118. 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 C—Engineering Biology

SEC. 121. SHORT TITLE.

This subtitle may be cited as the ''Engineering Biology Research and Development Act of 2015''.

SEC. 122. FINDINGS.

The Congress makes the following findings:

(1) Cellular and molecular processes may be used, mimicked, or redesigned to develop new products, processes, and systems that improve societal well-being, strengthen national security, and contribute to the economy.

(2) Engineering biology relies on scientists and engineers with a diverse and unique set of skills combining the biological, physical, and information sciences and engineering.

(3) Long-term research and development is necessary to create breakthroughs in engineering biology. Such research and development requires government investment as the benefits are too distant or uncertain for industry to support alone.

(4) The Federal Government can play an important role by facilitating the development of tools and technologies to further advance engineering biology, including multiple user facilities that the Federal Government is uniquely able to support.

(5) Since other countries are investing significant resources in engineering biology, the United States is at risk of losing its competitive lead in this emerging area if it does not invest the necessary resources and have a national strategy.

(6) A National Engineering Biology Initiative can serve to establish new research directions and technology goals, improve interagency coordination and planning processes, drive technology transfer, and help ensure optimal returns on the Federal investment.

SEC. 123. DEFINITIONS.

In this subtitle—

(1) the term ''Advisory Committee'' means the advisory committee designated under section 125;

(2) the term ''biomanufacturing'' means the manufacturing of products using biological manufacturing technologies;

(3) the term ''engineering biology'' means the science and engineering of cellular and molecular processes to advance fundamental understanding of complex natural systems and to develop new and advance existing products, processes, and systems that will contribute significantly to societal well-being, national security, and the economy;

(4) the term ''Interagency Committee'' means the interagency committee designated under section 124(e); and

(5) the term ''Program'' means the National Engineering Biology Research and Development Program established under section 124.

SEC. 124. NATIONAL ENGINEERING BIOLOGY RESEARCH AND DEVELOPMENT PROGRAM.

(a) IN GENERAL.—The President shall implement a National Engineering Biology Research and Development Program to advance societal well-being, national security, and economic productivity and competitiveness through—

(1) advancing areas of research at the intersection of the biological, physical, and information sciences and engineering;

(2) supporting social science research that advances the field of engineering biology and contributes to the adoption of new products, processes, and technologies;

(3) expanding the number of researchers, educators, and students with engineering biology training;

(4) accelerating the translation and commercialization of engineering biology research and development by the private sector; and

(5) improving the interagency planning and coordination of Federal Government activities related to engineering biology.

(b) PROGRAM ACTIVITIES.—The activities of the Program shall include—

(1) sustained support for engineering biology research and development through—

(A) grants to individual investigators and interdisciplinary teams of investigators;

(B) projects funded under joint solicitations by a collaboration of no fewer than two agencies participating in the Program; and

(C) interdisciplinary research centers that are organized to investigate basic research questions and carry out technology development and demonstration activities;

(2) education and training of undergraduate and graduate students in research at the intersection of biological, physical, and information sciences and engineering;

(3) activities to develop robust mechanisms for tracking and quantifying the outputs and economic benefits of engineering biology; and

(4) activities to accelerate the translation and commercialization of new products, processes, and technologies by—

(A) identifying precompetitive research opportunities;

(B) facilitating public-private partnerships in engineering biology research and development;

(C) connecting researchers, graduate students, and postdoctoral fellows with entrepreneurship education and training opportunities; and

(D) supporting proof of concept activities and the formation of startup companies including through programs such as the Small Business Innovation Research Program and the Small Business Technology Transfer Program.

(c) EXPANDING PARTICIPATION.—The Program shall include, to the maximum extent practicable, outreach to primarily undergraduate and minority-serving institutions about Program opportunities, and shall encourage the development of research collaborations between research-intensive universities and primarily undergraduate and minority-serving institutions.

(d) ETHICAL, LEGAL, ENVIRONMENTAL, AND SOCIETAL ISSUES.—Program activities shall take into account ethical, legal, environmental, and other appropriate societal issues, including the need for safeguards and monitoring systems to protect society against the unintended release of engineered materials produced, by—

(1) supporting research, including in the social sciences, and other activities addressing ethical, legal, environmental, and other appropriate societal issues related to engineering biology, including integrating research on these topics with the research and development in engineering biology, and ensuring that the results of such research are widely disseminated, including through interdisciplinary engineering biology research centers described in subsection (b)(1)(C); and

(2) ensuring, through the agencies and departments that participate in the Program, that public input and outreach are integrated into the Program by the convening of regular and ongoing public discussions through mechanisms such as citizen panels, consensus conferences, and educational events, as appropriate.

(e) INTERAGENCY COMMITTEE.—The President shall designate an interagency committee on engineering biology, which shall include representatives from the Office of Science and Technology Policy, the National Science Foundation, the Department of Energy, the National Aeronautics and Space Administration, the National Institute of Standards and Technology, the Environmental Protection Agency, and any other agency that the President considers appropriate. The Director of the Office of Science and Technology Policy shall select a chairperson from among the members of the Interagency Committee. The Interagency Committee shall oversee the planning, management, and coordination of the Program. The Interagency Committee shall—

(1) provide for interagency coordination of Federal engineering biology research, development, and other activities undertaken pursuant to the Program;

(2) establish and periodically update goals and priorities for the Program;

(3) develop, not later than 12 months after the date of enactment of this subtitle, and update every 5 years, a strategic plan to guide the activities of the Program and meet the goals and priorities established under paragraph (2) and describe—

(A) the Program's support for long-term funding for interdisciplinary engineering biology research and development;

(B) the Program's support for education and public outreach activities;

(C) the Program's support for research and other activities on ethical, legal, environmental, and other appropriate societal issues related to engineering biology; and

(D) how the Program will move results out of the laboratory and into application for the benefit of society and United States competitiveness;

(4) propose an annually coordinated interagency budget for the Program that will ensure the maintenance of a robust engineering biology research and development portfolio and ensure that the balance of funding across the Program is sufficient to meet the goals and priorities established for the Program;

(5) develop a plan to utilize Federal programs, such as the Small Business Innovation Research Program and the Small Business Technology Transfer Program, in support of the goals described in subsection (b)(4); and

(6) in carrying out its responsibilities under this section, take into consideration the recommendations of the Advisory Committee, the results of the workshop convened under section 126, existing reports on related topics, and the views of academic, State, industry, and other appropriate groups.

(f) ANNUAL REPORT.—The Interagency Committee shall prepare an annual report, to be submitted to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 90 days after submission of the President's annual budget request, that includes—

(1) the Program budget for the fiscal year to which such budget request applies, and for the then current fiscal year, including a breakout of spending for each agency participating in the Program, and for the development and acquisition of any research facilities and instrumentation; and

(2) an assessment of how Federal agencies are implementing the plan described in subsection (e)(5), and a description of the amount and number of Small Business Innovation Research and Small Business Technology Transfer awards made in support of the Program.

SEC. 125. ADVISORY COMMITTEE.

(a) IN GENERAL.—The President shall designate an advisory committee on engineering biology research and development with at least 12 members, including representatives of research and academic institutions, industry, and nongovernmental entities, who are qualified to provide advice on the Program.

(b) ASSESSMENT.—The Advisory Committee shall assess—

(1) progress made in implementing the Program;

(2) the need to revise the Program;

(3) the balance of activities and funding across the Program;

(4) whether the Program priorities and goals developed by the Interagency Committee are helping to maintain United States leadership in engineering biology;

(5) the management, coordination, implementation, and activities of the Program; and

(6) whether ethical, legal, environmental, and other appropriate societal issues are adequately addressed by the Program.

(c) REPORTS.—The Advisory Committee shall report within 3 years after the date of enactment of this Act, and thereafter not less frequently than once every 5 years, to the President, the Committee on Science, Space, and Technology of the House of Representatives, and the Committee on Commerce, Science, and Transportation of the Senate, on its findings of the assessment carried out under this section and its recommendations for ways to improve the Program.

(d) FEDERAL ADVISORY COMMITTEE ACT APPLICATION.—Section 14 of the Federal Advisory Committee Act (5 U.S.C. App.) shall not apply to the Advisory Committee.

SEC. 126. EXTERNAL REVIEW OF ETHICAL, LEGAL, ENVIRONMENTAL, AND SOCIETAL ISSUES.

(a) IN GENERAL.—Not later than 12 months after the date of enactment of this Act, the Director of the National Science Foundation shall enter into an agreement with the National Academies to convene a workshop to review the ethical, legal, environmental, and other appropriate societal issues related to engineering biology research and development. The goals of the workshop shall be to—

(1) assess the current research on such issues;

(2) evaluate the research gaps relating to such issues; and

(3) provide recommendations on how the Program can address the research needs identified.

(b) REPORT TO CONGRESS.—Not later than 2 years after the date of enactment of this Act, the Director of the National Science Foundation shall transmit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a summary report containing the findings of the workshop convened under this section.

SEC. 127. AGENCY ACTIVITIES.

(a) NATIONAL SCIENCE FOUNDATION.—As part of the Program, the National Science Foundation shall—

(1) support basic research at the intersection of the biological, physical, and information sciences and engineering through individual grants and through interdisciplinary research centers;

(2) support research on the environmental and social effects of engineering biology;

(3) provide research instrumentation support for engineering biology disciplines; and

(4) award grants, on a competitive basis, to enable institutions to support graduate students and postdoctoral fellows who perform some of their engineering biology research in an industry setting.

(b) DEPARTMENT OF COMMERCE.—As part of the Program, the Director of the National Institute of Standards and Technology shall—

(1) establish a bioscience research program to advance the development of standard reference materials and measurements and to create new data tools, techniques, and processes necessary to advance engineering biology and biomanufacturing;

(2) provide access to user facilities with advanced or unique equipment, services, materials, and other resources to industry, institutions of higher education, nonprofit organizations, and government agencies to perform research and testing; and

(3) provide technical expertise to inform the development of guidelines and safeguards for new products, processes, and systems of engineering biology.

(c) DEPARTMENT OF ENERGY.—As part of the Program, the Secretary of Energy shall—

(1) conduct and support basic research, development, demonstration, and commercial application activities in engineering biology disciplines, including in the areas of synthetic biology, advanced biofuel development, biobased materials, and environmental remediation; and

(2) provide access to user facilities with advanced or unique equipment, services, materials, and other resources, as appropriate, to industry, institutions of higher education, nonprofit organizations, and government agencies to perform research and testing.

(d) NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.—As part of the Program, the National Aeronautics and Space Administration shall—

(1) conduct and support basic and applied research in engineering biology fields, including in the field of synthetic biology, and related to Earth and space sciences, aeronautics, space technology, and space exploration and experimentation, consistent with the priorities established in the National Academies' decadal surveys; and

(2) award grants, on a competitive basis, that enable institutions to support graduate students and postdoctoral fellows who perform some of their engineering biology research in an industry setting.

(e) ENVIRONMENTAL PROTECTION AGENCY.—As part of the Program, the Environmental Protection Agency shall support research on how products, processes, and systems of engineering biology will affect the environment.

TITLE II—STEM EDUCATION AND DIVERSITY

Subtitle A—STEM Education and Workforce

SEC. 201. SENSE OF CONGRESS.

It is the sense of Congress that the National Science and Technology Council's Committee on STEM Education (CoSTEM), established under section 101 of the America COMPETES Reauthorization Act of 2010 (42 U.S.C. 6621), has taken important initial steps toward developing and implementing a strategic plan for Federal investments in STEM education, but that more work must be done to solicit and take into account views and experience from stakeholders who help implement or are the beneficiaries of Federal STEM programs across the Nation. It is further the sense of Congress that science mission agencies such as the National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration, and the Department of Energy are essential partners in contributing to the goals and implementation of a Federal STEM strategic plan because such agencies have unique scientific and technological facilities as well as highly trained scientists who are eager and able to contribute to improved STEM learning outcomes in their own communities.

SEC. 202. COORDINATION OF FEDERAL STEM EDUCATION.

Section 101 of America COMPETES Reauthorization Act of 2010 (42 U.S.C. 6621) is amended—

(1) in subsection (b)(5)—

(A) by redesignating subparagraphs (A) through (D) as subparagraphs (B) through (E), respectively; and

(B) by inserting before subparagraph (B), as so redesigned by subparagraph (A) of this paragraph, the following new subparagraph:

''(A) have as its primary goal to leverage the limited STEM education funding and other assets, including intellectual capital, invested by Federal STEM agencies for maximum benefit to student learning;'';

(2) by striking the second subsection (b);

(3) by redesignating subsection (c) as subsection (f);

(4) by inserting after subsection (b), the following new subsections:

''(c) COORDINATOR FOR STEM EDUCATION.—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 STEM Education. When an appropriate associate director is not available, the Director may designate another appropriate senior government official as the Coordinator for STEM Education. The Coordinator shall chair the committee established under subsection (a). The Coordinator shall, with the assistance of appropriate senior officials from other Committee on STEM Education agencies, ensure that the requirements of this section are satisfied.

''(d) STAKEHOLDER INPUT.—

''(1) INTERAGENCY CONSOLIDATION.—For all agency proposals to consolidate or transfer budgets or functions for STEM education programs or activities between agencies, at the time of submission of such proposals to Congress, the Director shall report to Congress on activities undertaken by the Office of Science and Technology Policy or by relevant agencies to take into consideration relevant input from the STEM Education Advisory Panel established under subsection (e) and other relevant education stakeholders.

''(2) INTRAAGENCY CONSOLIDATION.—For all agency proposals to internally consolidate or terminate STEM education programs with budgets exceeding $10,000,000, at the time of submission of such proposals to Congress, the head of the relevant agency shall report to Congress on activities to solicit and take into consideration input on such proposals from the STEM Education Advisory Panel established under subsection (e) and other relevant education stakeholders.

''(e) STEM EDUCATION ADVISORY PANEL.—

''(1) IN GENERAL.—The President shall establish or designate a STEM Education Advisory Panel. The cochairs of the Advisory Panel shall meet the qualifications of Panel membership required in paragraph (2) and may be members of the President's Council of Advisors on Science and Technology.

''(2) QUALIFICATIONS.—The Advisory Panel established or designated by the President under this subsection shall consist of members from academic institutions, industry, informal education providers, nonprofit STEM education organizations, foundations, and local and State educational agencies. Members of the Advisory Panel shall be qualified to provide advice on Federal STEM education programs, best practices in STEM education, assessment of STEM education programs, STEM education standards, industry needs for STEM graduates, and public-private STEM education partnerships.

''(3) DUTIES.—The Advisory Panel shall advise the President and the committee established under subsection (a) on implementing the Federal STEM education strategic plan required under subsection (b)(5) and coordinating Federal STEM programs with nongovernmental STEM initiatives and State and local educational agencies.

''(4) REPORT.—The Advisory Panel shall report, not more than 1 year after enactment of the America Competes Reauthorization Act of 2015, on options for evidence-based implementation of the Federal STEM strategic plan required under subsection (b)(5), including options for designating certain agencies as coordinating leads for different priority investment areas, timelines for implementation, and specific management, budget, policy, or other steps that agencies must take to effectively implement the strategic plan.

''(5) SUNSET.—The authorization for the Advisory Panel established under this subsection shall expire 3 years after the date of enactment of the America Competes Reauthorization Act of 2015.''; and

(5) in subsection (f), as so redesignated by paragraph (3) of this section—

(A) by inserting ''progress made in implementing'' after ''describing'';

(B) by striking paragraph (3); and

(C) by redesignating paragraphs (4) and (5) as paragraphs (3) and (4), respectively.

SEC. 203. GRAND CHALLENGES IN EDUCATION RESEARCH.

(a) IN GENERAL.—The Director of the National Science Foundation and the Secretary of Education shall collaborate in—

(1) identifying, prioritizing, and developing strategies to address grand challenges in research and development, including assessment, 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

(2) ensuring the dissemination and promoting the utilization of the results of such research and development.

(b) STAKEHOLDER INPUT.—In identifying the grand challenges under 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 officials from State educational agencies and local educational agencies, 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 under subsection (a), the Director and the Secretary shall, at a minimum, consider research and development on—

(1) scalability, sustainability, and replication of successful STEM activities, programs, and models, in formal and informal environments;

(2) model systems that support improved teaching and learning of STEM across entire local educational agencies and States, including rural areas, and encompassing and integrating the teaching and learning of STEM in formal and informal venues;

(3) implementation of new State mathematics and science standards;

(4) what makes a STEM teacher effective and STEM teacher professional development effective, including development of tools and methodologies to measure STEM teacher effectiveness;

(5) cyber-enabled and other technology tools for teaching and learning, including massive open online courses;

(6) STEM teaching and learning in informal environments, including development of tools and methodologies for assessing STEM teaching and learning in informal environments; and

(7) 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.

(d) REPORT TO CONGRESS.—Not later than 12 months after the date of enactment of this Act, the Director and the Secretary shall report 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 and promote the utilization of 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. 204. NATIONAL RESEARCH COUNCIL REPORT ON STEAM EDUCATION.

(a) SENSE OF CONGRESS.—It is the sense of Congress that—

(1) the Science, Technology, Engineering, and Mathematics (STEM) Talent Expansion Program set an important goal of increasing the number of students graduating with associate or baccalaureate degrees in the STEM fields, and this should continue to be a focus of that program;

(2) to further the goal of the STEM Talent Expansion Program, as well as STEM education promotion programs across the Federal Government, innovative approaches are needed to enhance STEM education in the United States;

(3) STEAM, which is the integration of arts and design, broadly defined, into Federal STEM programming, research, and innovation activities, is a method-validated approach to maintaining the competitiveness of the United States in both workforce and innovation and to increasing and broadening students' engagement in the STEM fields;

(4) STEM graduates need more than technical skills to thrive in the 21st century workforce; they also need to be creative, innovative, collaborative, and able to think critically;

(5) STEAM should be recognized as providing value to STEM research and education programs across Federal agencies, without supplanting the focus on the traditional STEM disciplines;

(6) Federal agencies should work cooperatively on interdisciplinary initiatives to support the integration of arts and design into STEM, and current interdisciplinary programs should be strengthened;

(7) Federal agencies should allow for STEAM activities under current and future grant-making and other activities; and

(8) Federal agencies should clarify that, where appropriate, data collection, surveys, and reporting on STEM activities and grant-making should examine activities that involve cross-disciplinary learning that integrates specialized skills and expertise from both art and science.

(b) NATIONAL RESEARCH COUNCIL WORKSHOP.—The National Science Foundation shall enter into an arrangement with the National Research Council to conduct a workshop on the integration of arts and design with STEM education. The workshop shall include a discussion of—

(1) how the perspectives and experience of artists and designers may contribute to the advancement of science, engineering, and innovation, for example through the development of visualization aids for large experimental and computational data sets;

(2) how arts and design-based education experiences might support formal and informal STEM education at the pre-K–12 level, particularly in fostering creativity and risk taking, and encourage more students to pursue STEM studies, including students from groups historically underrepresented in STEM;

(3) how the teaching of design principles can be better integrated into undergraduate engineering and other STEM curricula, including in the first two years of undergraduate studies, to enhance student capacity for creativity and innovation and improve student retention, including students from groups historically underrepresented in STEM; and

(4) what additional steps, if any, Federal science agencies should take to promote the inclusion of arts and design principles in their respective STEM programs and activities in order to improve student STEM learning outcomes, increase the recruitment and retention of students into STEM studies and careers, and increase innovation in the United States.

(c) REPORT.—Not later than 18 months after the date of enactment of this Act, the National Research Council shall submit a report to Congress providing a summary description of the discussion and findings from the workshop required under subsection (b).

SEC. 205. ENGAGING FEDERAL SCIENTISTS AND ENGINEERS IN STEM EDUCATION.

The Director of the Office of Science and Technology Policy shall develop guidance for Federal agencies to increase opportunities and training, as appropriate, for Federal scientists and engineers to participate in STEM engagement activities through their respective agencies and in their communities.

Subtitle B—Broadening Participation in STEM

SEC. 211. SHORT TITLE.

This subtitle may be cited as the ''STEM Opportunities Act of 2015''.

SEC. 212. PURPOSE.

(a) IN GENERAL.—The Director of the Office of Science and Technology Policy, acting through the Federal science agencies, shall carry out programs and activities with the purpose of ensuring that Federal science agencies and institutions of higher education receiving Federal research and development funding are fully engaging their entire talent pool.

(b) PURPOSES.—The purposes of this subtitle are as follows:

(1) To promote research on and increase understanding of the participation and trajectories of women and underrepresented minorities in STEM careers at institutions of higher education and Federal science agencies, including Federal laboratories.

(2) To raise awareness within Federal science agencies, including Federal laboratories, and institutions of higher education about cultural and institutional barriers limiting the recruitment, retention, promotion, and other indicators of participation and achievement of women and underrepresented minorities in academic and Government STEM research careers at all levels.

(3) To identify, disseminate, and implement best practices at Federal science agencies, including Federal laboratories, and at institutions of higher education to remove or reduce cultural and institutional barriers limiting the recruitment, retention, and success of women and underrepresented minorities in academic and Government STEM research careers.

(4) To provide grants to institutions of higher education to recruit, retain, and advance STEM faculty members from underrepresented minority groups and to implement or expand reforms in undergraduate STEM education in order to increase the number of students from underrepresented minority groups receiving degrees in these fields.

SEC. 213. FEDERAL SCIENCE AGENCY POLICIES FOR CAREGIVERS.

(a) OSTP GUIDANCE.—Not later than 6 months after the date of enactment of this Act, the Director of the Office of Science and Technology Policy shall provide guidance to Federal science agencies to establish policies that—

(1) apply to all—

(A) intramural and extramural research awards; and

(B) primary investigators who have caregiving responsibilities, including care for a newborn or newly adopted child and care for an immediate family member who is sick or disabled; and

(2) provide—

(A) flexibility in timing for the initiation of approved research awards;

(B) no-cost extensions of research awards;

(C) grant supplements as appropriate to research awards for research technicians or equivalent to sustain research activities; and

(D) any other appropriate accommodations at the discretion of the head of each agency.

(b) UNIFORMITY OF GUIDANCE.—In providing such guidance, the Director of the Office of Science and Technology Policy shall encourage uniformity and consistency in the policies across all agencies.

(c) ESTABLISHMENT OF POLICIES.—Consistent with the guidance provided under this section, Federal science agencies shall maintain or develop and implement policies for caregivers and shall broadly disseminate such policies to current and potential grantees.

(d) DATA ON USAGE.—Federal science agencies shall—

(1) collect data on the usage of the policies under subsection (c), by gender, at both institutions of higher education and Federal laboratories; and

(2) report such data on an annual basis to the Director of the Office of Science and Technology Policy in such form as required by the Director.

SEC. 214. COLLECTION AND REPORTING OF DATA ON FEDERAL RESEARCH GRANTS.

(a) COLLECTION OF DATA.—

(1) IN GENERAL.—Each Federal science agency shall collect standardized record-level annual information on demographics, primary field, award type, budget request, funding outcome, and awarded budget for all applications for merit-reviewed research and development grants to institutions of higher education and Federal laboratories supported by that agency.

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

(3) RECORD-LEVEL DATA.—

(A) REQUIREMENT.—On an annual basis, beginning with the deadline under subparagraph (C), each Federal science agency shall submit to the Director of the National Science Foundation record-level data collected under paragraph (1) in the form required by such Director.

(B) PREVIOUS DATA.—As part of the first submission under subparagraph (A), each Federal science agency, to the extent practicable, shall also submit comparable record-level data for the 5 years preceding the deadline under subparagraph (C).

(C) DEADLINE.—The deadline under this paragraph is 2 years after the date of enactment of this Act.

(b) REPORTING OF DATA.—The Director of the National Science Foundation shall publish statistical summary data collected under this section, disaggregated and cross-tabulated by race, ethnicity, gender, age, and years since completion of doctoral degree, including in conjunction with the National Science Foundation's report required by section 37 of the Science and Technology Equal Opportunities Act (42 U.S.C. 1885d; Public Law 96–516).

SEC. 215. POLICIES FOR REVIEW OF FEDERAL RESEARCH GRANTS.

(a) IN GENERAL.—The Director of the Office of Science and Technology Policy, in collaboration with the Director of the National Science Foundation, shall identify information and best practices useful for educating program officers and members of standing peer review committees at Federal science agencies about—

(1) research on implicit bias based on gender, race, or ethnicity; and

(2) methods to minimize the effect of such bias in the review of extramural and intramural Federal research grants.

(b) GUIDANCE TO ALL FEDERAL SCIENCE AGENCIES.—The Director of the Office of Science and Technology Policy shall disseminate the information and best practices identified in subsection (a) to all Federal science agencies and provide guidance as necessary on policies to implement such practices within each agency.

(c) ESTABLISHMENT OF POLICIES.—Consistent with the guidance provided in subsection (b), Federal science agencies shall maintain or develop and implement policies and practices to minimize the effects of implicit bias in the review of extramural and intramural Federal research grants.

(d) REPORT TO CONGRESS.—Not later than 2 years after the date of enactment of this Act, the Director of the Office of Science and Technology Policy shall report to Congress on what steps all Federal science agencies have taken to implement policies and practices to minimize the effects of bias in the review of extramural and intramural Federal research grants.

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

(a) COLLECTION OF DATA.—

(1) IN GENERAL.—Not later than 3 years after the date of enactment of this Act, and at least every 5 years thereafter, the Director of the National Science Foundation shall carry out a survey to collect institution-level data on the demographics of STEM faculty, by broad fields of STEM, at different types of institutions of higher education.

(2) CONSIDERATIONS.—To the extent practicable, the Director of the National Science Foundation shall consider, by gender, race, ethnicity, citizenship status, age, and years since completion of doctoral degree—

(A) the number and percentage of faculty;

(B) the number and percentage of faculty at each rank;

(C) the number and percentage of faculty who are in nontenure-track positions, including teaching and research;

(D) the number and percentage of faculty who are reviewed for promotion, including tenure, and the percentage of that number who are promoted, including being awarded tenure;

(E) faculty years in rank;

(F) the number and percentage of faculty to leave tenure-track positions;

(G) the number and percentage of faculty hired, by rank; and

(H) the number and percentage of faculty in leadership positions.

(b) EXISTING SURVEYS.—The Director of the National Science Foundation—

(1) may carry out the requirements under subsection (a) by collaborating with statistical centers at other Federal agencies to modify or expand, as necessary, existing Federal surveys of higher education; or

(2) may award a grant or contract to an institution of higher education or other nonprofit organization to design and carry out the requirements under subsection (a).

(c) REPORTING DATA.—The Director of the National Science Foundation shall publish statistical summary data collected under this section, including as part of the National Science Foundation's report required by section 37 of the Science and Technology Equal Opportunities Act (42 U.S.C. 1885d; Public Law 96–516).

(d) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Director of the National Science Foundation $3,000,000 for each of fiscal years 2016 through 2018 to develop and carry out the initial survey required in subsection (a).

SEC. 217. CULTURAL AND INSTITUTIONAL BARRIERS TO EXPANDING THE ACADEMIC AND FEDERAL STEM WORKFORCE.

(a) BEST PRACTICES AT INSTITUTIONS OF HIGHER EDUCATION.—

(1) DEVELOPMENT OF GUIDANCE.—Not later than 6 months after the date of enactment of this Act, the Director of the National Science Foundation shall develop written guidance for institutions of higher education on the best practices for—

(A) conducting periodic campus culture surveys of STEM departments, with a particular focus on identifying any cultural or institutional barriers to or successful enablers for the recruitment, retention, promotion, and other indicators of participation and achievement, of women and underrepresented minorities in STEM degree programs and academic STEM careers; and

(B) providing educational opportunities, including workshops as described in subsection (c), for STEM faculty and administrators to learn about current research on implicit bias in recruitment, evaluation, and promotion of faculty in STEM and recruitment and evaluation of undergraduate and graduate students in STEM degree programs.

(2) EXISTING GUIDANCE.—In developing the guidance in paragraph (1), the Director of the National Science Foundation shall utilize guidance already developed by the National Aeronautics and Space Administration, the Department of Energy, and the Department of Education.

(3) DISSEMINATION OF GUIDANCE.—The Director of the National Science Foundation shall broadly disseminate the guidance developed in paragraph (1) to institutions of higher education that receive Federal research funding.

(4) REPORTS TO THE NATIONAL SCIENCE FOUNDATION.—The Director of the National Science Foundation shall develop a policy that—

(A) applies to, at a minimum, the institutions classified under the Indiana University Center for Postsecondary Research Carnegie Classification on January 1, 2015, as a doctorate-granting university with a very high level of research activity; and

(B) requires each institution identified in subparagraph (A), not later than 3 years after the date of enactment of this Act, to report to the Director of the National Science Foundation on activities and policies developed and implemented based on the guidance provided in paragraph (1).

(b) BEST PRACTICES AT FEDERAL LABORATORIES.—

(1) DEVELOPMENT OF GUIDANCE.—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 written guidance for Federal laboratories to develop and implement practices and policies to—

(A) conduct periodic laboratorywide culture surveys of research personnel at all levels, with a particular focus on identifying any cultural or institutional barriers to the recruitment, retention, and success of women and underrepresented minorities in STEM careers at Federal laboratories; and

(B) provide educational opportunities, including workshops as described in subsection (c), for STEM research personnel to learn about current research in implicit bias in recruitment, evaluation, and promotion of research personnel at Federal laboratories.

(2) ESTABLISHMENT OF POLICIES.—Consistent with the guidance provided in paragraph (1), Federal science agencies with Federal laboratories shall maintain or develop and implement policies for their respective Federal laboratories.

(c) WORKSHOPS TO ADDRESS CULTURAL BARRIERS TO EXPANDING THE ACADEMIC AND FEDERAL STEM WORKFORCE.—

(1) IN GENERAL.—Not later than 6 months after the date of enactment of this Act, the Director of the National Science Foundation shall recommend a uniform policy for Federal science agencies to carry out a program

of workshops that educate STEM department chairs at institutions of higher education, senior managers at Federal laboratories, and other federally funded researchers about methods that minimize the effects of implicit bias in the career advancement, including hiring, tenure, promotion, and selection for any honor based in part on the recipient's research record, of academic and Federal STEM researchers.

(2) INTERAGENCY COORDINATION.—The Director of the National Science Foundation shall ensure that workshops supported under this subsection are coordinated across Federal science agencies and jointly supported as appropriate.

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

(4) PRIORITY FIELDS FOR ACADEMIC PARTICIPANTS.—In considering the participation of STEM department chairs and other academic researchers, the Director of the National Science Foundation shall prioritize workshops for the broad fields of STEM in which the national rate of representation of women among tenured or tenure-track faculty or non-faculty researchers at doctorate-granting institutions of higher education is less than 25 percent, according to the most recent data available from the National Center for Science and Engineering Statistics.

(5) 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 or underrepresented minorities in STEM.

(6) 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 STEM discipline or disciplines 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; and

(ii) in the case of Federal laboratories, individuals with personnel management responsibilities comparable to those of an institution of higher education department chair.

(B) Activities at the workshops shall include research presentations and interactive discussions or other activities that increase the awareness of the existence of implicit bias in recruitment, hiring, tenure review, promotion, and other forms of formal recognition of individual achievement for faculty and other federally funded STEM researchers and shall 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 underrepresented subgroups, including minority women, minority men, and first generation minority graduates in research.

(D) Workshop programs shall include information on best practices for mentoring undergraduate and graduate women and underrepresented minority students.

(7) DATA ON WORKSHOPS.—Any proposal for funding by an organization seeking to carry out a workshop under this subsection shall include a description of how such organization will—

(A) collect data on the rates of attendance by invitees in workshops, including information on the home institution and department of attendees, and the rank of faculty attendees;

(B) conduct attitudinal surveys on workshop attendees before and after the workshops; and

(C) collect follow-up data on any relevant institutional policy or practice changes reported by attendees not later than 1 year after attendance in such a workshop.

(8) REPORT TO NSF.—Organizations receiving funding to carry out workshops under this subsection shall report the data required in paragraph (7) to the Director of the National Science Foundation in such form as required by such Director.

(d) REPORT TO CONGRESS.—Not later than 4 years after the date of enactment of this Act, the Director of the National Science Foundation shall submit a report to Congress that includes—

(1) a summary and analysis of the types and frequency of activities and policies developed and carried out under subsection (a) based on the reports submitted under paragraph (4) of such subsection; and

(2) a description and evaluation of the status and effectiveness of the program of workshops required under subsection (c), including a summary of any data reported under paragraph (8) of such subsection.

(e) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Director of the National Science Foundation $2,000,000 for each of fiscal years 2016 through 2020 to carry out this section.

SEC. 218. RESEARCH AND DISSEMINATION AT THE NATIONAL SCIENCE FOUNDATION.

(a) IN GENERAL.—The Director of the National Science Foundation shall award research grants and carry out dissemination activities consistent with the purposes of this subtitle, including—

(1) research grants to analyze the record-level data collected under section 214 and section 216, consistent with policies to ensure the privacy of individuals identifiable by such data;

(2) research grants to study best practices for work-life accommodation;

(3) research grants to study the impact of policies and practices that are implemented under this subtitle or that are otherwise consistent with the purposes of this subtitle;

(4) collaboration with other Federal science agencies and professional associations to exchange best practices, harmonize work-life accommodation policies and practices, and overcome common barriers to work-life accommodation; and

(5) collaboration with institutions of higher education in order to clarify and catalyze the adoption of a coherent and consistent set of work-life accommodation policies and practices.

(b) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Director of the National Science Foundation $5,000,000 for each of fiscal years 2016 through 2020 to carry out this section.

SEC. 219. REPORT TO CONGRESS.

Not later than 4 years after the date of enactment of this Act, the Director of the Office of Science and Technology Policy shall submit a report to Congress that includes—

(1) a description and evaluation of the status and usage of caregiver policies at all Federal science agencies, including any recommendations for revising or expanding such policies;

(2) a description of any significant updates to the policies for review of Federal research grants required under section 215, and any evidence of the impact of such policies on the review or awarding of Federal research grants; and

(3) a description and evaluation of the status of Federal laboratory policies and practices required under section 217(b), including any recommendations for revising or expanding such policies.

SEC. 220. NATIONAL SCIENCE FOUNDATION SUPPORT FOR INCREASING DIVERSITY AMONG STEM FACULTY AT INSTITUTIONS OF HIGHER EDUCATION.

(a) GRANTS.—The Director of the National Science Foundation shall award grants to institutions of higher education (or consortia thereof) for the development of innovative reform efforts designed to increase the recruitment, retention, and advancement of individuals from underrepresented minority groups in academic STEM careers.

(b) MERIT REVIEW; COMPETITION.—Grants shall be awarded under this section on a merit-reviewed, competitive basis.

(c) USE OF FUNDS.—Activities supported by grants under this section may include—

(1) institutional assessment activities, such as data analyses and policy review, in order to identify and address specific issues in the recruitment, retention, and advancement of faculty members from underrepresented minority groups;

(2) implementation of institution-wide improvements in workload distribution, such that faculty members from underrepresented minority groups are not disadvantaged in the amount of time available to focus on research, publishing papers, and engaging in other activities required to achieve tenure status and run a productive research program;

(3) development and implementation of training courses for administrators and search committee members to ensure that candidates from underrepresented minority groups are not subject to implicit biases in the search and hiring process;

(4) development and hosting of intra- or inter-institutional workshops to propagate best practices in recruiting, retaining, and advancing faculty members from underrepresented minority groups;

(5) professional development opportunities for faculty members from underrepresented minority groups;

(6) activities aimed at making undergraduate STEM students from underrepresented minority groups aware of opportunities for academic careers in STEM fields;

(7) activities to identify and engage exceptional graduate students from underrepresented minority groups at various stages of their studies and to encourage them to enter academic careers; and

(8) other activities consistent with subsection (a), as determined by the Director of the National Science Foundation.

(d) SELECTION PROCESS.—

(1) APPLICATION.—An institution of higher education (or consortia thereof) seeking funding under this section shall submit an application to the Director of the National Science Foundation at such time, in such manner, and containing such information and assurances as such Director may require. The application shall include, at a minimum, a description of—

(A) the reform effort that is being proposed for implementation by the institution of higher education;

(B) any available evidence of specific difficulties in the recruitment, retention, and advancement of faculty members from underrepresented minority groups in STEM academic careers within the institution of higher education submitting an application,

and how the proposed reform effort would address such issues;

(C) how the institution of higher education submitting an application plans to sustain the proposed reform effort beyond the duration of the grant; and

(D) how the success and effectiveness of the proposed reform effort will be evaluated and assessed in order to contribute to the national knowledge base about models for catalyzing institutional change.

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

(A) the likelihood of success in undertaking the proposed reform effort at the institution of higher education submitting the application, including the extent to which the administrators of the institution are committed to making the proposed reform effort a priority;

(B) the degree to which the proposed reform effort will contribute to change in institutional culture and policy such that greater value is placed on the recruitment, retention, and advancement of faculty members from underrepresented minority groups;

(C) the likelihood that the institution of higher education will sustain or expand the proposed reform effort beyond the period of the grant; and

(D) the degree to which evaluation and assessment plans are included in the design of the proposed reform effort.

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

(e) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Director of the National Science Foundation $10,000,000 for each of fiscal years 2016 through 2020 to carry out this section.

SEC. 221. NATIONAL SCIENCE FOUNDATION SUPPORT FOR BROADENING PARTICIPATION IN UNDERGRADUATE STEM EDUCATION.

(a) GRANTS.—The Director of the National Science Foundation shall award grants to institutions of higher education (or consortia thereof) to implement or expand research-based reforms in undergraduate STEM education for the purpose of recruiting and retaining students from minority groups who are underrepresented in STEM fields, with a priority focus on natural science and engineering fields.

(b) MERIT REVIEW; COMPETITION.—Grants shall be awarded under this section on a merit-reviewed, competitive basis.

(c) USE OF FUNDS.—Activities supported by grants under this section may include—

(1) implementation or expansion of innovative, research-based approaches to broaden participation of underrepresented minority groups in STEM fields;

(2) implementation or expansion of bridge, cohort, tutoring, or mentoring programs designed to enhance the recruitment and retention of students from underrepresented minority groups in STEM fields;

(3) implementation or expansion of outreach programs linking institutions of higher education and K–12 school systems in order to heighten awareness among pre-college students from underrepresented minority groups of opportunities in college-level STEM fields and STEM careers;

(4) implementation or expansion of faculty development programs focused on improving retention of undergraduate STEM students from underrepresented minority groups;

(5) implementation or expansion of mechanisms designed to recognize and reward faculty members who demonstrate a commitment to increasing the participation of students from underrepresented minority groups in STEM fields;

(6) expansion of successful reforms aimed at increasing the number of STEM students from underrepresented minority groups 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 of higher education;

(7) expansion of opportunities for students from underrepresented minority groups to conduct STEM research in industry, at Federal laboratories, and at international research institutions or research sites;

(8) provision of stipends for students from underrepresented minority groups participating in research;

(9) development of research collaborations between research-intensive universities and primarily undergraduate minority-serving institutions;

(10) support for graduate students and postdoctoral fellows from underrepresented minority groups to participate in instructional or assessment activities at primarily undergraduate institutions, including primarily undergraduate minority-serving institutions and two-year institutions of higher education; and

(11) other activities consistent with subsection (a), as determined by the Director of the National Science Foundation.

(d) SELECTION PROCESS.—

(1) APPLICATION.—An institution of higher education (or consortium thereof) seeking a grant under this section shall submit an application to the Director of the National Science Foundation at such time, in such manner, and containing such information and assurances as such 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, a description of the previously implemented reform effort, including data about the recruitment, retention, and academic achievement of students from underrepresented minority groups;

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

(D) a description of existing or planned institutional policies and practices regarding faculty hiring, promotion, tenure, and teaching assignment that reward faculty contributions to improving the education of students from underrepresented minority groups in STEM; and

(E) how the success and effectiveness of the proposed reform effort will be evaluated and assessed in order to contribute to the national knowledge base about models for catalyzing institutional change.

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

(A) the likelihood of success of the proposed reform 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 effort will contribute to change in institutional culture and policy such that greater value is placed on faculty engagement in the retention of students from underrepresented minority groups;

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

(D) the degree to which evaluation and assessment plans are included in the design of the proposed reform effort.

(3) PRIORITY.—For applications that include an expansion of existing reforms beyond a single academic unit, the Director of the National Science Foundation shall give priority to applications for which a senior institutional administrator, such as a dean or other administrator of equal or higher rank, serves as the principal investigator.

(4) GRANT DISTRIBUTION.—The Director of the National Science Foundation shall ensure, to the extent practicable, that grants awarded under this section are made to a variety of types of institutions of higher education, including two-year and minority-serving institutions of higher education.

(e) EDUCATION RESEARCH.—

(1) IN GENERAL.—All grants made under this section shall include an education research component that will support the design and implementation of a system for data collection and evaluation of proposed reform efforts in order to build the knowledge base on promising models for increasing recruitment and retention of students from underrepresented minority groups in STEM education at the undergraduate level across a diverse set of institutions.

(2) DISSEMINATION.—The Director of the National Science Foundation shall coordinate with relevant Federal agencies in disseminating the results of the research under this subsection to ensure that best practices in broadening participation in STEM education at the undergraduate level are made readily available to all institutions of higher education, other Federal agencies that support STEM programs, non-Federal funders of STEM education, and the general public.

(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Director of the National Science Foundation $15,000,000 for each of fiscal years 2016 through 2020 to carry out this section.

SEC. 222. DEFINITIONS.

(a) THIS SUBTITLE.—In this subtitle:

(1) FEDERAL LABORATORY.—The term ''Federal laboratory'' has the meaning given such term in section 4 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3703).

(2) FEDERAL SCIENCE AGENCY.—The term ''Federal science agency'' means any Federal agency with at least $100,000,000 in research and development expenditures in fiscal year 2014.

(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) STEM.—The term ''STEM'' means science, technology, engineering, and mathematics, including other academic subjects that build on these disciplines such as computer science.

(b) NATIONAL SCIENCE FOUNDATION AUTHORIZATION ACT OF 2002.—Section 4 of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n note) is amended—

(1) by redesignating paragraph (16) as paragraph (17); and

(2) by inserting after paragraph (15) the following new paragraph:

''(16) STEM.—The term 'STEM' means science, technology, engineering, and mathematics, including other academic subjects that build on these disciplines such as computer science.''.

TITLE III—NATIONAL SCIENCE FOUNDATION

Subtitle A—General Provisions

SEC. 301. AUTHORIZATION OF APPROPRIATIONS.

(a) FISCAL YEAR 2016.—

(1) IN GENERAL.—There are authorized to be appropriated to the Foundation $7,723,550,000 for fiscal year 2016.

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

(A) $6,186,300,000 shall be made available for research and related activities;

(B) $962,570,000 shall be made available for education and human resources;

(C) $200,310,000 shall be made available for major research equipment and facilities construction;

(D) $354,840,000 shall be made available for agency operations and award management;

(E) $4,370,000 shall be made available for the Office of the National Science Board, including salaries and compensation for members of the Board and staff appointed under section 4 of the National Science Foundation Act of 1950 (42 U.S.C. 1863), travel and training costs for members of the Board and such staff, general and Board operating expenses, representational expenses for the Board, honorary awards made by the Board, Board reports (other than the report entitled ''Science and Engineering Indicators''), and contracts; and

(F) $15,160,000 shall be made available for the Office of Inspector General.

(b) FISCAL YEAR 2017.—

(1) IN GENERAL.—There are authorized to be appropriated to the Foundation $8,099,010,000 for fiscal year 2017.

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

(A) $6,495,620,000 shall be made available for research and related activities;

(B) $1,010,700,000 shall be made available for education and human resources;

(C) $200,000,000 shall be made available for major research equipment and facilities construction;

(D) $372,580,000 shall be made available for agency operations and award management;

(E) $4,500,000 shall be made available for the Office of the National Science Board, including salaries and compensation for members of the Board and staff appointed under section 4 of the National Science Foundation Act of 1950 (42 U.S.C. 1863), travel and training costs for members of the Board and such staff, general and Board operating expenses, representational expenses for the Board, honorary awards made by the Board, Board reports (other than the report entitled ''Science and Engineering Indicators''), and contracts; and

(F) $15,610,000 shall be made available for the Office of Inspector General.

(c) FISCAL YEAR 2018.—

(1) IN GENERAL.—There are authorized to be appropriated to the Foundation $8,493,560,000 for fiscal year 2018.

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

(A) $6,820,400,000 shall be made available for research and related activities;

(B) $1,061,230,000 shall be made available for education and human resources;

(C) $200,000,000 shall be made available for major research equipment and facilities construction;

(D) $391,210,000 shall be made available for agency operations and award management;

(E) $4,640,000 shall be made available for the Office of the National Science Board, including salaries and compensation for members of the Board and staff appointed under section 4 of the National Science Foundation Act of 1950 (42 U.S.C. 1863), travel and training costs for members of the Board and such staff, general and Board operating expenses, representational expenses for the Board, honorary awards made by the Board, Board reports (other than the report entitled ''Science and Engineering Indicators''), and contracts; and

(F) $16,080,000 shall be made available for the Office of Inspector General.

(d) FISCAL YEAR 2019.—

(1) IN GENERAL.—There are authorized to be appropriated to the Foundation $8,907,820,000 for fiscal year 2019.

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

(A) $7,161,420,000 shall be made available for research and related activities;

(B) $1,114,300,000 shall be made available for education and human resources;

(C) $200,000,000 shall be made available for major research equipment and facilities construction;

(D) $410,770,000 shall be made available for agency operations and award management;

(E) $4,780,000 shall be made available for the Office of the National Science Board, including salaries and compensation for members of the Board and staff appointed under section 4 of the National Science Foundation Act of 1950 (42 U.S.C. 1863), travel and training costs for members of the Board and such staff, general and Board operating expenses, representational expenses for the Board, honorary awards made by the Board, Board reports (other than the report entitled ''Science and Engineering Indicators''), and contracts; and

(F) $16,570,000 shall be made available for the Office of Inspector General.

(e) FISCAL YEAR 2020.—

(1) IN GENERAL.—There are authorized to be appropriated to the Foundation $9,342,790,000 for fiscal year 2020.

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

(A) $7,519,490,000 shall be made available for research and related activities;

(B) $1,170,010,000 shall be made available for education and human resources;

(C) $200,000,000 shall be made available for major research equipment and facilities construction;

(D) $431,310,000 shall be made available for agency operations and award management;

(E) $4,920,000 shall be made available for the Office of the National Science Board, including salaries and compensation for members of the Board and staff appointed under section 4 of the National Science Foundation Act of 1950 (42 U.S.C. 1863), travel and training costs for members of the Board and such staff, general and Board operating expenses, representational expenses for the Board, honorary awards made by the Board, Board reports (other than the report entitled ''Science and Engineering Indicators''), and contracts; and

(F) $17,060,000 shall be made available for the Office of Inspector General.

SEC. 302. FINDINGS AND SENSE OF CONGRESS ON SUPPORT FOR ALL FIELDS OF SCIENCE AND ENGINEERING.

(a) FINDINGS.—Congress finds that the Foundation's investments in social, behavioral, and economic research have addressed challenges, including—

(1) in medicine, matching organ donors to patients, leading to a dramatic growth in paired kidney transplants;

(2) in policing, implementing predictive models that help to yield significant reductions in crime;

(3) in resource allocation, developing the theories underlying the Federal Communications Commission spectrum auction, which has generated over $60,000,000,000 in revenue;

(4) in disaster preparation and recovery, identifying barriers to effective disaster evacuation strategies;

(5) in national defense, assisting United States troops in cross-cultural communication and in identifying threats; and

(6) in areas such as economics, education, cybersecurity, transportation, and national defense, supporting informed decisionmaking in foreign and domestic policy.

(b) SENSE OF CONGRESS.—It is the sense of Congress that in order to achieve its mission ''to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense'' the Foundation must continue to support unfettered, competitive, merit-reviewed basic research across all fields of science and engineering, including the social, behavioral, and economic sciences.

SEC. 303. NATIONAL SCIENCE FOUNDATION MERIT REVIEW.

(a) SENSE OF CONGRESS.—It is the sense of Congress that—

(1) the Foundation's Intellectual Merit and Broader Impacts criteria remain appropriate for evaluating grant proposals, as concluded by the 2011 National Science Board Task Force on Merit Review;

(2) evaluating proposals on the basis of the Foundation's Intellectual Merit and Broader Impacts criteria ensures that—

(A) proposals funded by the Foundation are of high quality and advance scientific knowledge; and

(B) the Foundation's overall funding portfolio addresses societal needs through research findings or through related activities; and

(3) as evidenced by the Foundation's contributions to scientific advancement, economic development, human health, and national security, its peer review and merit review processes have successfully identified and funded scientifically and societally relevant research, remain the gold standard for the world, and must be preserved.

(b) CRITERIA.—The Foundation shall maintain the Intellectual Merit and Broader Impacts criteria as the basis for evaluating grant proposals in the merit review process.

SEC. 304. MANAGEMENT AND OVERSIGHT OF LARGE FACILITIES.

(a) LARGE FACILITIES OFFICE.—The Director shall maintain a Large Facilities Office within the Foundation. The functions of the Large Facilities Office shall be to support the research directorates in the development and implementation of major research facilities, including by—

(1) serving as the Foundation's primary resource for all policy or process issues related to the development and implementation of major research facilities;

(2) serving as a Foundation-wide resource on project management, including providing expert assistance on nonscientific and nontechnical aspects of project planning, budgeting, implementation, management, and oversight; and

(3) coordinating and collaborating with research directorates to share best management practices and lessons learned from prior projects.

(b) OVERSIGHT OF LARGE FACILITIES.—The Director shall appoint a senior agency official within the Office of the Director whose primary responsibility is oversight of major research facilities. The duties of this official shall include—

(1) oversight of the development, construction, and operation of major research facilities across the Foundation;

(2) in collaboration with the directors of the research directorates and other senior

agency officials as appropriate, ensuring that the requirements of section 14(a) of the National Science Foundation Authorization Act of 2002 are satisfied;

(3) serving as a liaison to the National Science Board for approval and oversight of major research facilities; and

(4) periodically reviewing and updating as necessary Foundation policies and guidelines for the development and construction of major research facilities.

(c) POLICIES FOR COSTING LARGE FACILITIES.—

(1) IN GENERAL.—The Director shall ensure that the Foundation's policies for developing and managing major research facility construction costs are consistent with the best practices described in the March 2009 General Accountability Office Report GAO–09–3SP.

(2) REPORT.—Not later than 12 months after the date of enactment of this Act, the Director shall submit to Congress a report describing the Foundation's policies for developing and managing major research facility construction costs, including a description of any aspects of the policies that diverge from the best practices recommended in General Accountability Office Report GAO–09–3SP.

SEC. 305. SUPPORT FOR POTENTIALLY TRANSFORMATIVE RESEARCH.

(a) IN GENERAL.—The Director shall establish and periodically update grant solicitation, merit review, and funding policies and mechanisms designed to identify and provide support for high-risk, high-reward basic research proposals.

(b) POLICIES AND MECHANISMS.—Such policies and mechanisms may include—

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

(2) establishment of review panels for the primary purpose of selecting high-risk, high-reward proposals;

(3) development of guidance to standard review panels to encourage the identification and consideration of high-risk, high-reward proposals; and

(4) support for workshops and other 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. 306. STRENGTHENING INSTITUTIONAL RESEARCH PARTNERSHIPS.

(a) IN GENERAL.—For any Foundation research grant, in an amount greater than $5,000,000, 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.

(c) REPORT.—Not later than 2 years 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 2 previous fiscal years and make any recommendations for how such partnerships can continue to be strengthened.

SEC. 307. INNOVATION CORPS.

(a) SENSE OF CONGRESS.—It is the sense of Congress that—

(1) the National Science Foundation's Innovation Corps (I-Corps) was established to foster a national innovation ecosystem by encouraging institutions, scientists, engineers, and entrepreneurs to identify and explore the innovation and commercial potential of Foundation-funded research well beyond the laboratory;

(2) the Foundation's I-Corps includes investments in entrepreneurship and commercialization education, training, and mentoring, ultimately leading to the practical deployment of technologies, products, processes, and services that improve the Nation's competitiveness, promote economic growth, and benefit society; and

(3) by building networks of entrepreneurs, educators, mentors, institutions, and collaborations, and supporting specialized education and training, I-Corps is at the leading edge of a strong, lasting foundation for an American innovation ecosystem.

(b) PROGRAM.—

(1) IN GENERAL.—The Director shall carry out a program to award grants for entrepreneurship and commercialization education to Foundation-funded researchers to increase the economic and social impact of federally funded research.

(2) PURPOSES.—The purpose of the program shall be to increase the capacity of STEM researchers and students to successfully engage in entrepreneurial activities and to help transition the results of federally funded research into the marketplace by—

(A) identifying STEM research that can lead to the practical deployment of technologies, products, processes, and services that improve the Nation's economic competitiveness;

(B) bringing STEM researchers and students together with entrepreneurs, venture capitalists, and other industry representatives experienced in commercialization of new technologies;

(C) supporting entrepreneurship and commercialization education and training for faculty, students, postdoctoral fellows, and other STEM researchers; and

(D) promoting the development of regional and national networks of entrepreneurs, venture capitalists, and other industry representatives who can serve as mentors to researchers and students at Foundation-funded institutions across the country.

(3) ADDITIONAL USE OF FUNDS.—Grants awarded under this subsection may be used to help support—

(A) prototype and proof-of-concept development for the funded project; and

(B) additional activities needed to build a national infrastructure for STEM entrepreneurship.

(4) OTHER FEDERAL AGENCIES.—The Director may establish agreements with other Federal agencies that fund scientific research to make researchers funded by those agencies eligible to participate in the Foundation's Innovation Corps program.

SEC. 308. DEFINITIONS.

For purposes of this title:

(1) DIRECTOR.—The term ''Director'' means the Director of the Foundation.

(2) FOUNDATION.—The term ''Foundation'' means the National Science Foundation.

(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) STEM.—The term ''STEM'' means science, technology, engineering, and mathematics, including other academic subjects that build on these disciplines such as computer science.

Subtitle B—STEM Education

SEC. 321. NATIONAL SCIENCE BOARD REPORT ON CONSOLIDATION OF STEM EDUCATION ACTIVITIES AT THE FOUNDATION.

(a) IN GENERAL.—The National Science Board shall review and evaluate the appropriateness of the Foundation's portfolio of STEM education programs and activities at the pre-K–12 and undergraduate levels, including informal education, taking into account the mission of the Foundation and the 2013 Federal STEM Education 5-Year Strategic Plan.

(b) REPORT.—Not later than 1 year after the date of enactment of this Act, the National Science Board shall submit to Congress a report summarizing their findings and including—

(1) an analysis of how well the Foundation's portfolio of STEM education programs is contributing to the mission of the Foundation;

(2) an analysis of how well STEM education programs and activities are coordinated and best practices are shared across the Foundation;

(3) an analysis of how well the Foundation's portfolio of STEM education programs is aligned with and contributes to priority STEM education investment areas described in the 2013 Federal STEM Education 5-Year Strategic Plan;

(4) any Board recommendations regarding internal reorganization, including consolidation, of the Foundation's STEM education programs and activities, taking into account both the mission of the Foundation and the 2013 Federal STEM Education 5-Year Strategic Plan;

(5) any Board recommendations regarding the Foundation's role in helping to implement the Federal STEM Education 5-Year Strategic Plan, including opportunities for the Foundation to more effectively partner and collaborate with other Federal agencies; and

(6) any additional Board recommendations regarding specific management, policy, budget, or other steps the Foundation should take to increase effectiveness and accountability across its portfolio of STEM education programs and activities.

SEC. 322. MODELS FOR GRADUATE STUDENT SUPPORT.

(a) IN GENERAL.—The Director shall enter into an agreement with the National Research Council to convene a workshop or roundtable to examine models of Federal support for STEM graduate students, including the Foundation's Graduate Research Fellowship program and comparable fellowship programs at other agencies, traineeship programs, and the research assistant model.

(b) PURPOSE.—The purpose of the workshop or roundtable shall be to compare and evaluate the extent to which each of these models helps to prepare graduate students for diverse careers utilizing STEM degrees, including at diverse types of institutions of higher education, in industry, and at government agencies and research laboratories, and to make recommendations regarding—

(1) how current Federal programs and models, including programs and models at the Foundation, can be improved;

(2) the appropriateness of the current distribution of funding among the different models at the Foundation and across the agencies; and

(3) the appropriateness of creating a new education and training program for graduate students distinct from programs that provide direct financial support, including the grants authorized in section 527 of the America COMPETES Reauthorization Act of 2010 (42 U.S.C. 1862p–15).

(c) CRITERIA.—At a minimum, in comparing programs and models, the workshop or roundtable participants shall consider the capacity of such programs or models to provide students with knowledge and skills—

(1) to become independent, creative, successful researchers;

(2) to participate in large interdisciplinary research projects, including in an international context;

(3) to adhere to the highest standards for research ethics;

(4) to become high-quality teachers utilizing the most currently available evidence-based pedagogy;

(5) in oral and written communication, to both technical and nontechnical audiences;

(6) in innovation, entrepreneurship, and business ethics; and

(7) in program management.

(d) GRADUATE STUDENT INPUT.—The participants in the workshop or roundtable shall include current or recent STEM graduate students.

(e) REPORT.—Not later than 1 year after the date of enactment of this Act, the National Research Council shall submit to Congress a summary report of the findings and recommendations of the workshop or roundtable convened under this section.

SEC. 323. UNDERGRADUATE STEM EDUCATION REFORM.

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. UNDERGRADUATE STEM EDUCATION REFORM.

''(a) IN GENERAL.—The Director, through the Directorate for Education and Human Resources, shall award grants, on a competitive, merit-reviewed basis, to institutions of higher education (or to consortia thereof) and to other eligible nonprofit organizations 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.

''(b) INTERDIRECTORATE WORKING GROUP ON UNDERGRADUATE STEM EDUCATION.—In carrying out the requirements of this section, the Directorate for Education and Human Resources shall collaborate and coordinate with the Research Directorates, including through the establishment of an interdirectorate working group on undergraduate STEM education reform, in order to identify and implement new and expanded opportunities for collaboration between STEM disciplinary researchers and education researchers on the reform of undergraduate STEM education.

''(c) GRANTS.—Research and development supported by grants under this section may encompass a single discipline, multiple disciplines, or interdisciplinary education at the undergraduate level, and may include—

''(1) research foundational to the improvement of teaching, learning, and retention;

''(2) development, implementation, and assessment of innovative, research-based approaches to transforming teaching, learning, and retention; and

''(3) scaling of successful efforts on learning and learning environments, broadening participation, workforce preparation, employing emerging technologies, or other reforms in STEM education, including 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.

''(d) SELECTION PROCESS.—

''(1) APPLICATIONS.—An institution of higher education or other eligible nonprofit organization 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. In addition to a description of the proposed research, development, or scaling effort, including a description of the research findings that will serve as the basis for the proposed effort, applications shall include, at a minimum—

''(A) evidence of institutional support for, and commitment to, the proposed effort, including long-term commitment to implement and scale successful strategies resulting from the current effort;

''(B) 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

''(C) a description of the plans for assessment and evaluation of the effort, 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 for funding under this section, the Director shall consider, as appropriate to the scale of the proposed effort—

''(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 undergraduate STEM education reform a priority of the participating academic unit or units;

''(B) the degree to which the proposed effort 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 effort beyond the period of the grant; and

''(D) the degree to which the proposed effort will contribute to the systematic accumulation of knowledge on STEM education.

''(3) PRIORITY.—The Director shall give priority to proposals focused on the first 2 years of undergraduate education, including STEM education at 2-year institutions of higher education.

''(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. 324. ADVANCED MANUFACTURING EDUCATION.

Section 506(b) of the America COMPETES Reauthorization Act of 2010 (42 U.S.C. 1862p–1(b)) is amended to read as follows:

''(b) ADVANCED MANUFACTURING EDUCATION.—The Director shall award grants, on a competitive, merit reviewed basis, to community colleges for the development and implementation of innovative advanced manufacturing education reforms to ensure an adequate and well-trained advanced manufacturing workforce. Activities supported by grants under this subsection may include—

''(1) the development or expansion of educational materials, courses, curricula, strategies, and methods that will lead to improved advanced manufacturing degree or certification programs, including the integration of industry standards and workplace competencies into the curriculum;

''(2) the development and implementation of faculty professional development programs that enhance a faculty member's capabilities and teaching skills in advanced manufacturing, including efforts to understand current advanced manufacturing technologies and practices;

''(3) the establishment of centers that provide models and leadership in advanced manufacturing education and serve as regional or national clearinghouses for educational materials and methods, including in rural areas;

''(4) activities to enhance the recruitment and retention of students into certification and degree programs in advanced manufacturing, including the provision of improved mentoring and internship opportunities;

''(5) the establishment of partnerships with private sector entities to ensure the development of an advanced manufacturing workforce with the skills necessary to meet regional economic needs; and

''(6) other activities as determined appropriate by the Director.''.

SEC. 325. STEM EDUCATION PARTNERSHIPS.

Section 9 of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n) is amended—

(1) in the section heading, by striking ''**MATHEMATICS AND SCIENCE**'' and inserting ''**STEM**'';

(2) by striking ''mathematics and science'' each place it appears in subsections (a) and (b) and inserting ''STEM'';

(3) by striking ''mathematics or science'' each place it appears in subsection (a)(3) and (4)(A) and inserting ''STEM'';

(4) by striking ''mathematics, science, or engineering'' in subsection (a)(2)(B) and inserting ''STEM'';

(5) by striking ''mathematics, science, and technology'' in subsection (a)(3)(B)(ii)(II) and (8) and inserting ''STEM'';

(6) by striking ''professional mathematicians, scientists, and engineers'' in subsection (a)(3)(F) and inserting ''STEM professionals'';

(7) by striking ''mathematicians, scientists, and engineers'' in subsection (a)(3)(J) and (M) and inserting ''STEM professionals'';

(8) by striking ''scientists, technologists, engineers, or mathematicians'' in subsection (a)(8) and inserting ''STEM professionals'';

(9) by striking ''science, technology, engineering, and mathematics'' each place it appears in subsection (a)(3)(K) and (10) and inserting ''STEM'';

(10) by striking ''science, technology, engineering, or mathematics'' in subsection (a)(10)(A)(ii)(II) and inserting ''STEM'';

(11) by striking ''science, mathematics, engineering, and technology'' each place it appears in subsection (a)(5) and inserting ''STEM'';

(12) by striking ''science, mathematics, engineering, or technology'' in subsection (a)(5) and inserting ''STEM'';

(13) by striking ''mathematics, science, engineering, and technology'' in subsection (b)(1) and (2) and inserting ''STEM''; and

(14) by striking subsection (d).

SEC. 326. NOYCE SCHOLARSHIP PROGRAM AMENDMENTS.

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

(1) in subsection (a)(2)(B), by inserting ''or bachelor's'' after ''master's'';

(2) in subsection (c)—

(A) by striking ''and'' at the end of paragraph (2)(B);

(B) in paragraph (3), by—

(i) inserting ''for teachers with master's degrees in their field'' after ''Teaching Fellowships''; and

(ii) by striking the period at the end of subparagraph (B) and inserting ''; and''; and

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

''(4) in the case of National Science Foundation Master Teaching Fellowships for teachers with bachelor's degrees in their field—

''(A) offering academic courses leading to a master's degree and leadership training to prepare individuals to become master teachers in elementary and secondary schools; and

''(B) offering programs both during and after matriculation in the program for which the fellowship is received to enable fellows to become highly effective mathematics and science teachers, including mentoring, training, induction, and professional development activities, to fulfill the service requirements of this section, including the requirements of subsection (e), and to exchange ideas with others in their fields.'';

(3) in subsection (e), by striking ''subsection (g)'' and inserting ''subsection (h)''; and

(4) by adding after subsection (f) the following new subsection:

''(g) SUPPORT FOR MASTER TEACHING FELLOWS WHILE ENROLLED IN A MASTER'S DEGREE PROGRAM.—A National Science Foundation Master Teacher Fellow may receive a maximum of 1 year of fellowship support while enrolled in a master's degree program as described in subsection (c)(4)(A), except that if such fellow is enrolled in a part-time program, such amount shall be prorated according to the length of the program.''.

SEC. 327. INFORMAL STEM EDUCATION.

(a) GRANTS.—The Director, through the Directorate for Education and Human Resources, shall continue to award competitive, merit-reviewed grants to support—

(1) research and development of innovative out-of-school STEM learning and emerging STEM learning environments in order to improve STEM learning outcomes and engagement in STEM; and

(2) research that advances the field of informal STEM education.

(b) USES OF FUNDS.—Activities supported by grants under this section may encompass a single STEM discipline, multiple STEM disciplines, or integrative STEM initiatives and shall include—

(1) research and development that improves our understanding of learning and engagement in informal environments, including the role of informal environments in broadening participation in STEM; and

(2) design and testing of innovative STEM learning models, programs, and other resources for informal learning environments to improve STEM learning outcomes and increase engagement for K–12 students, K–12 teachers, and the general public, including design and testing of the scalability of models, programs, and other resources.

SEC. 328. RESEARCH AND DEVELOPMENT TO SUPPORT IMPROVED K–12 LEARNING.

(a) IN GENERAL.—The Director, acting through the Directorate for Education and Human Resources, shall award competitive, merit-reviewed grants to support research and development on alignment, implementation, impact, and ongoing improvement of standards and equivalent learning expectations used by States in mathematics, science, and, as appropriate, other State-based STEM standards.

(b) RESEARCH AREAS.—In making awards under this section, the Director shall consider proposals for research and development, including, as appropriate, large-scale research and development, of—

(1) resources, including virtual resources such as web portals, for content, professional development, and research results;

(2) teacher education and professional development;

(3) learning progressions;

(4) assessments;

(5) metrics for evaluating the impact of standards; and

(6) other areas of research and development that are likely to contribute to the alignment, implementation, impact, and ongoing improvement of standards in STEM subjects.

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 2015''.

SEC. 402. AUTHORIZATION OF APPROPRIATIONS.

(a) FISCAL YEAR 2016.—

(1) IN GENERAL.—There are authorized to be appropriated to the Secretary of Commerce $1,119,700,000 for the National Institute of Standards and Technology for fiscal year 2016.

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

(A) $754,700,000 shall be authorized for scientific and technical research and services laboratory activities;

(B) $59,000,000 shall be authorized for the construction and maintenance of facilities; and

(C) $306,000,000 shall be authorized for industrial technology services activities, of which—

(i) $141,000,000 shall be authorized for the Hollings Manufacturing Extension Partnership under section 25 of the National Institute of Standards and Technology Act (15 U.S.C. 278k) and the program under section 26 of such Act (15 U.S.C. 278l), of which not more than $20,000,000 shall be for the competitive grant program under section 25(f) of such Act; and

(ii) $150,000,000 shall be authorized for the Network for Manufacturing Innovation Program established under section 34 of such Act (15 U.S.C. 278s).

(b) FISCAL YEAR 2017.—

(1) IN GENERAL.—There are authorized to be appropriated to the Secretary of Commerce $1,174,390,000 for the National Institute of Standards and Technology for fiscal year 2017.

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

(A) $792,440,000 shall be authorized for scientific and technical research and services laboratory activities;

(B) $61,950,000 shall be authorized for the construction and maintenance of facilities; and

(C) $320,000,000 shall be authorized for industrial technology services activities, of which—

(i) $160,000,000 shall be authorized for the Hollings Manufacturing Extension Partnership under section 25 of the National Institute of Standards and Technology Act (15 U.S.C. 278k) and the program under section 26 of such Act (15 U.S.C. 278l), of which not more than $20,000,000 shall be for the competitive grant program under section 25(f) of such Act; and

(ii) $150,000,000 shall be authorized for the Network for Manufacturing Innovation Program established under section 34 of such Act (15 U.S.C. 278s).

(c) FISCAL YEAR 2018.—

(1) IN GENERAL.—There are authorized to be appropriated to the Secretary of Commerce $1,207,100,000 for the National Institute of Standards and Technology for fiscal year 2018.

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

(A) $832,060,000 shall be authorized for scientific and technical research and services laboratory activities;

(B) $65,050,000 shall be authorized for the construction and maintenance of facilities; and

(C) $310,000,000 shall be authorized for industrial technology services activities, of which—

(i) $160,000,000 shall be authorized for the Hollings Manufacturing Extension Partnership under section 25 of the National Institute of Standards and Technology Act (15 U.S.C. 278k) and the program under section 26 of such Act (15 U.S.C. 278l), of which not more than $20,000,000 shall be for the competitive grant program under section 25(f) of such Act; and

(ii) $150,000,000 shall be authorized for the Network for Manufacturing Innovation Program established under section 34 of such Act (15 U.S.C. 278s).

(d) FISCAL YEAR 2019.—

(1) IN GENERAL.—There are authorized to be appropriated to the Secretary of Commerce $1,251,960,000 for the National Institute of Standards and Technology for fiscal year 2019.

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

(A) $873,660,000 shall be authorized for scientific and technical research and services laboratory activities;

(B) $68,300,000 shall be authorized for the construction and maintenance of facilities; and

(C) $310,000,000 shall be authorized for industrial technology services activities, of which—

(i) $160,000,000 shall be authorized for the Hollings Manufacturing Extension Partnership under section 25 of the National Institute of Standards and Technology Act (15 U.S.C. 278k) and the program under section 26 of such Act (15 U.S.C. 278l), of which not more than $20,000,000 shall be for the competitive grant program under section 25(f) of such Act; and

(ii) $150,000,000 shall be authorized for the Network for Manufacturing Innovation Program established under section 34 of such Act (15 U.S.C. 278s).

(e) FISCAL YEAR 2020.—

(1) IN GENERAL.—There are authorized to be appropriated to the Secretary of Commerce $1,299,060,000 for the National Institute of Standards and Technology for fiscal year 2020.

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

(A) $917,340,000 shall be authorized for scientific and technical research and services laboratory activities;

(B) $71,710,000 shall be authorized for the construction and maintenance of facilities; and

(C) $310,000,000 shall be authorized for industrial technology services activities, of which—

(i) $160,000,000 shall be authorized for the Hollings Manufacturing Extension Partnership under section 25 of the National Institute of Standards and Technology Act (15 U.S.C. 278k) and the program under section 26 of such Act (15 U.S.C. 278l), of which not more than $20,000,000 shall be for the competitive grant program under section 25(f) of such Act; and

(ii) $150,000,000 shall be authorized for the Network for Manufacturing Innovation Program established under section 34 of such Act (15 U.S.C. 278s).

SEC. 403. HOLLINGS MANUFACTURING EXTENSION PARTNERSHIP.

Section 25 of the National Institute of Standards and Technology Act (15 U.S.C. 278k) is amended to read as follows:

''SEC. 25. HOLLINGS MANUFACTURING EXTENSION PARTNERSHIP.

''(a) ESTABLISHMENT AND PURPOSE.—

''(1) IN GENERAL.—The Secretary, through the Director shall provide assistance for the creation and support of regional manufacturing extension centers for the transfer of manufacturing technology and best business practices. These centers shall be known as the 'Hollings Manufacturing Extension Centers' (in this Act referred to as the 'Centers'). The program under this section shall be known as the 'Hollings Manufacturing Extension Partnership'.

''(2) AFFILIATIONS.—Such Centers shall be affiliated with any United States-based public or nonprofit institution or organization, or group thereof, that applies for and is awarded financial assistance under this section.

''(3) OBJECTIVE.—The objective of the program is to enhance productivity, competitiveness, and technological performance in United States manufacturing through—

''(A) the transfer of manufacturing technology and techniques to Centers and, through them, to manufacturing companies throughout the United States;

''(B) the participation of individuals from industry, institutions of higher education, State governments, other Federal agencies, and, when appropriate, the Institute in cooperative technology transfer activities;

''(C) efforts to make new manufacturing technology and processes usable by United States-based small and medium-sized companies;

''(D) the active dissemination of scientific, engineering, technical, and management information about manufacturing to industrial firms, including small and medium-sized manufacturing companies;

''(E) the development of new partnerships, networks, and services that will assist small and medium-sized manufacturing companies expand into new markets, including global markets;

''(F) the utilization, when appropriate, of the expertise and capability that exists in Federal laboratories other than the Institute; and

''(G) the provision to community colleges and area career and technical education schools of information about the job skills needed in small and medium-sized manufacturing businesses in the regions they serve.

''(b) ACTIVITIES.—The activities of the Centers shall include—

''(1) the establishment of automated manufacturing systems and other advanced production technologies, based on research by the Institute and other entities, for the purpose of demonstrations and technology transfer;

''(2) assistance to Federal agencies in supporting United States-based manufacturing by identifying and providing technical assistance to small and medium-sized manufacturers to help them meet Federal agency procurement and acquisition needs;

''(3) the active transfer and dissemination of research findings and Center expertise to a wide range of companies and enterprises, particularly small and medium-sized manufacturers; and

''(4) the facilitation of collaborations and partnerships between small and medium-sized manufacturing companies and community colleges and area career and technical education schools to help such colleges and schools better understand the specific needs of manufacturers and to help manufacturers better understand the skill sets that students learn in the programs offered by such colleges and schools.

''(c) FINANCIAL ASSISTANCE AND REQUIREMENTS.—

''(1) FINANCIAL SUPPORT.—The Secretary may provide financial support to any Center created under subsection (a) for an initial period of 5 years, which may be renewed for an additional 5-year period. The Secretary may provide to a Center up to 50 percent of the capital and annual operating and maintenance funds required to create and maintain such Center.

''(2) REGULATIONS.—The Secretary shall implement, review, and update the sections of the Code of Federal Regulations related to this section at least once every 5 years.

''(3) APPLICATION.—

''(A) IN GENERAL.—Any public or nonprofit institution, or consortium thereof, may submit to the Secretary an application for financial support under this section, in accordance with the procedures established by the Secretary.

''(B) COST-SHARING.—In order to receive assistance under this section, an applicant for financial assistance under subparagraph (A) shall provide adequate assurances that non-Federal assets obtained from the applicant and the applicant's partnering organizations will be used as a funding source to meet not less than 50 percent of the costs incurred. For purposes of the preceding sentence, the costs incurred means the costs incurred in connection with the activities undertaken to improve the management, productivity, competitiveness, and technological performance of small and medium-sized manufacturing companies.

''(C) AGREEMENTS WITH OTHER ENTITIES.—In meeting the 50-percent requirement, it is anticipated that a Center will enter into agreements with other entities such as private industry, institutions of higher education, and State governments to accomplish programmatic objectives and access new and existing resources that will further the impact of the Federal investment made on behalf of small and medium-sized manufacturing companies.

''(D) LEGAL RIGHTS.—Each applicant under subparagraph (A) shall submit a proposal for the allocation of the legal rights associated with any invention that may result from the proposed Center's activities.

''(4) MERIT REVIEW.—The Secretary shall subject each such application to merit review. In making a decision whether to approve such application and provide financial support under this section, the Secretary shall consider, at a minimum, the following:

''(A) The merits of the application, particularly those portions of the application regarding technology transfer, training and education, and adaptation of manufacturing technologies to the needs of particular industrial sectors.

''(B) The quality of service to be provided.

''(C) Geographical diversity and extent of service area.

''(D) The percentage of funding and amount of in-kind commitment from other sources.

''(5) EVALUATION.—

''(A) IN GENERAL.—Each Center that receives financial assistance under this section shall be evaluated during its third year of operation by an evaluation panel appointed by the Secretary.

''(B) COMPOSITION.—Each such evaluation panel shall be composed of independent experts, none of whom shall be connected with the involved Center, and Federal officials.

''(C) CHAIR.—An official of the Institute shall chair the panel.

''(D) PERFORMANCE MEASUREMENT.—Each evaluation panel shall measure the involved Center's performance against the objectives specified in this section.

''(E) POSITIVE EVALUATION.—If the evaluation is positive, the Secretary may provide continued funding through the fifth year.

''(F) CORRECTIVE ACTION PLAN.—The Secretary may not provide funding for the remaining years of a Center's operation unless the evaluation is positive. A Center that has not received a positive evaluation by the evaluation panel shall be notified by the panel of the deficiencies in its performance and shall be placed on a corrective action plan and provided the opportunity to address deficiencies unless immediate action is necessary to protect the public interest. The program shall re-evaluate the Center within one year and if the Center has not addressed the deficiencies identified by the panel, or shown a significant improvement in its performance, the Director shall conduct a new competition or may close the Center.

''(G) ADDITIONAL FINANCIAL SUPPORT.—After the fifth year, a Center may receive additional financial support under this section if it has received a positive evaluation through an independent review, under procedures established by the Institute.

''(H) RECOMPETITION.—If a Center has received financial support for 10 consecutive years, the Director shall conduct a new competition. An existing Center may submit an application as part of the new competition.

''(I) RECOMPETITION PLAN.—Not later than 180 days after the date of enactment of the America Competes Reauthorization Act of 2015, the Director shall submit a plan to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate detailing how the program will implement the new competitions required under subparagraph (H). The Director shall consult with the MEP Advisory Board established under subsection (f) in the development and implementation of the plan.

''(6) OVERSIGHT BOARD.—

''(A) IN GENERAL.—Each Center that receives financial assistance under this section shall establish an oversight board that is broadly representative of regional stakeholders with a majority of board members drawn from local small and medium-sized manufacturing firms.

''(B) BYLAWS AND CONFLICT OF INTEREST.—Each board under subparagraph (A) shall adopt and submit to the Director bylaws to govern the operation of the board, including a conflict of interest policy to ensure relevant relationships are disclosed and proper recusal procedures are in place.

''(C) LIMITATION.—Board members may not serve simultaneously on more than one Center's oversight board or serve as a contractor providing services to a Center.

''(7) PROTECTION OF CONFIDENTIAL INFORMATION.—The Secretary shall ensure that the following are not publically disclosed:

''(A) Confidential information on the business operations of—

''(i) a participant under the program; or

''(ii) a client of a Center.

''(B) Trade secrets possessed by any client of a Center.

''(8) PATENT RIGHTS.—The provisions of chapter 18 of title 35, United States Code, shall apply, to the extent not inconsistent with this section, to the promotion of technology from research by Centers under this section except for contracts for such specific technology extension or transfer services as may be specified by statute or by the Director.

''(d) REPORTING AND AUDITING REQUIREMENTS.—The Director shall establish procedures regarding Center financial reporting and auditing to ensure that awards are used for the purposes specified in this section and are in accordance with sound accounting practices.

''(e) ACCEPTANCE OF FUNDS.—

''(1) IN GENERAL.—In addition to such sums as may be appropriated to the Secretary and Director to operate the Hollings Manufacturing Extension Partnership, the Secretary and Director also may accept funds from

other Federal departments and agencies and, under section 2(c)(7), from the private sector, to be available to the extent provided by appropriations Acts, for the purpose of strengthening United States manufacturing.

''(2) ALLOCATION OF FUNDS.—

''(A) FUNDS ACCEPTED FROM OTHER FEDERAL DEPARTMENTS OR AGENCIES.—The Director shall determine whether funds accepted from other Federal departments or agencies shall be counted in the calculation of the Federal share of capital and annual operating and maintenance costs under subsection (c).

''(B) FUNDS ACCEPTED FROM THE PRIVATE SECTOR.—Funds accepted from the private sector under section 2(c)(7), if allocated to a Center, may not be considered in the calculation of the Federal share under subsection (c) of this section.

''(f) MEP ADVISORY BOARD.—

''(1) ESTABLISHMENT.—There is established within the Institute a Manufacturing Extension Partnership Advisory Board (in this subsection referred to as the 'MEP Advisory Board').

''(2) MEMBERSHIP.—

''(A) IN GENERAL.—The MEP Advisory Board shall consist of not fewer than 10 members broadly representative of stakeholders, to be appointed by the Director. At least 2 members shall be employed by or on an advisory board for the Centers, at least 1 member shall represent a community college, and at least 5 other members shall be from United States small businesses in the manufacturing sector. No member shall be an employee of the Federal Government.

''(B) TERM.—Except as provided in subparagraph (C) or (D), the term of office of each member of the MEP Advisory Board shall be 3 years.

''(C) VACANCIES.—Any member appointed to fill a vacancy occurring prior to the expiration of the term for which his predecessor was appointed shall be appointed for the remainder of such term.

''(D) SERVING CONSECUTIVE TERMS.—Any person who has completed two consecutive full terms of service on the MEP Advisory Board shall thereafter be ineligible for appointment during the one-year period following the expiration of the second such term.

''(3) MEETINGS.—The MEP Advisory Board shall meet not less than 2 times annually and shall provide to the Director—

''(A) advice on Hollings Manufacturing Extension Partnership programs, plans, and policies;

''(B) assessments of the soundness of Hollings Manufacturing Extension Partnership plans and strategies; and

''(C) assessments of current performance against Hollings Manufacturing Extension Partnership program plans.

''(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.

''(5) REPORT.—The MEP Advisory Board shall transmit an annual report to the Secretary for transmittal to Congress within 30 days after the submission to Congress of the President's annual budget request in each year. Such report shall address the status of the program established pursuant to this section and comment on the relevant sections of the programmatic planning document and updates thereto transmitted to Congress by the Director under subsections (c) and (d) of section 23.

''(g) COMPETITIVE GRANT PROGRAM.—

''(1) ESTABLISHMENT.—The Director shall establish, within the Hollings Manufacturing Extension Partnership, a program of competitive awards among participants described in paragraph (2) for the purposes described in paragraph (3).

''(2) PARTICIPANTS.—Participants receiving awards under this subsection shall be the Centers, or a consortium of such Centers.

''(3) PURPOSE.—The purpose of the program under this subsection is to add capabilities to the Hollings Manufacturing Extension Partnership, including the development of projects to solve new or emerging manufacturing problems as determined by the Director, in consultation with the Director of the Hollings Manufacturing Extension Partnership, the MEP Advisory Board, and small and medium-sized manufacturers.

''(4) THEMES.—One or more themes for the competition may be identified, which may vary from year to year, depending on the needs of manufacturers and the success of previous competitions. These themes may include—

''(A) supply chain integration and quality management;

''(B) the creation of partnerships to encourage the development of a workforce with the skills necessary to meet the needs of a region, including the creation of apprenticeship opportunities and the adoption of universally recognized credential programs, as appropriate;

''(C) energy efficiency, including efficient building technologies and environmentally friendly materials, products, and processes;

''(D) enhancing the competitiveness of small and medium-sized manufacturers in the global marketplace;

''(E) the transfer of technology based on the technological needs of manufacturers and available technologies from institutions of higher education, laboratories, and other technology producing entities; and

''(F) areas that extend beyond traditional areas of manufacturing extension activities, including projects related to construction industry modernization.

''(5) REIMBURSEMENT.—Centers may be reimbursed for costs incurred under the program under this subsection.

''(6) APPLICATIONS.—Applications for awards under this subsection shall be submitted in such manner, at such time, and containing such information as the Director shall require, in consultation with the MEP Advisory Board.

''(7) SELECTION.—Awards under this subsection shall be peer reviewed and competitively awarded. The Director shall endeavor to have broad geographic diversity among selected proposals. The Director shall select proposals to receive awards that will—

''(A) utilize innovative or collaborative approaches to solving the problem described in the competition;

''(B) improve the competitiveness of industries in the region in which the Center or Centers are located; and

''(C) contribute to the long-term economic stability of that region, including the creation of jobs or training employees.

''(8) PROGRAM CONTRIBUTION.—Recipients of awards under this subsection shall not be required to provide a matching contribution.

''(9) DURATION.—Awards under this subsection shall last no longer than 5 years.

''(h) INNOVATIVE SERVICES INITIATIVE.—

''(1) ESTABLISHMENT.—The Director, in coordination with the Advanced Manufacturing Office of the Department of Energy, shall establish, within the Hollings Manufacturing Extension Partnership, an innovative services initiative to assist small and medium-sized manufacturers in—

''(A) reducing their energy usage, greenhouse gas emissions, and environmental waste to improve profitability;

''(B) accelerating the domestic commercialization of new product technologies, including components for renewable energy and energy efficiency systems; and

''(C) identifying and diversifying to new markets, including support for transitioning to the production of components for renewable energy and energy efficiency 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.

''(i) EXPORT ASSISTANCE TO SMALL AND MEDIUM-SIZED MANUFACTURERS.—

''(1) IN GENERAL.—The Director shall—

''(A) evaluate obstacles that are unique to small and medium-sized manufacturers that prevent such manufacturers from effectively competing in the global market;

''(B) implement a comprehensive export assistance initiative through the Centers to help small and medium-sized manufacturers address such obstacles; and

''(C) to the maximum extent practicable, ensure that the activities carried out under this subsection are coordinated with, and do not duplicate the efforts of, other export assistance programs within the Federal Government.

''(2) REQUIREMENTS.—The initiative shall include—

''(A) export assistance counseling;

''(B) the development of partnerships that will provide small and medium-sized manufacturers with greater access to and knowledge of global markets; and

''(C) improved communication between the Centers to assist such manufacturers in implementing appropriate, targeted solutions to such obstacles.

''(j) DEFINITIONS.—In this section:

''(1) AREA CAREER AND TECHNICAL EDUCATION SCHOOL.—The term 'area career and technical education school' has the meaning given such term in section 3 of the Carl D. Perkins Career and Technical Education Improvement Act of 2006 (20 U.S.C. 2302).

''(2) COMMUNITY COLLEGE.—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. 404. NATIONAL ACADEMIES REVIEW.

Not later than 6 months after the date of enactment of this Act, the Director of the National Institute of Standards and Technology shall enter into a contract with the National Academies to conduct a single, comprehensive review of the Institute's laboratory programs. The review shall—

(1) assess the technical merits and scientific caliber of the research conducted at the laboratories;

(2) examine the strengths and weaknesses of the 2010 laboratory reorganization on the Institute's ability to fulfill its mission;

(3) evaluate how cross-cutting research and development activities are planned, coordinated, and executed across the laboratories; and

(4) assess how the laboratories are engaging industry, including the incorporation of industry need, into the research goals and objectives of the Institute.

SEC. 405. IMPROVING NIST COLLABORATION WITH OTHER AGENCIES.

Section 8 of the National Bureau of Standards Authorization Act for Fiscal Year 1983 (15 U.S.C. 275b) is amended—

(1) in the section heading, by inserting ''AND WITH'' after ''PERFORMED FOR''; and

(2) by adding at the end the following: ''The Secretary may accept, apply for, use, and spend Federal, State, and non-governmental acquisition and assistance funds to further the mission of the Institute without regard to the source or the period of availability of these funds as well as share personnel, associates, facilities, and property with these partner organizations, with or without reimbursement, upon mutual agreement.''.

SEC. 406. MISCELLANEOUS PROVISIONS.

(a) FUNCTIONS AND ACTIVITIES.—Section 15 of the of the National Institute of Standards and Technology Act (15 U.S.C. 278e) is amended—

(1) by striking ''of the Government; and'' and inserting ''of the Government;'';

(2) by striking ''transportation services for employees of the Institute'' and inserting ''transportation services for employees, associates, or fellows of the Institute''; and

(3) by striking ''Code.'' and inserting ''Code; and (i) the protection of Institute buildings and other plant facilities, equipment, and property, and of employees, associates, visitors, or other persons located therein or associated therewith, notwithstanding any other provision of law.''.

(b) POST-DOCTORAL FELLOWSHIP PROGRAM.—Section 19 of the National Institute of Standards and Technology Act (15 U.S.C. 278g–2) is amended to read as follows:

''SEC. 19. POST-DOCTORAL FELLOWSHIP PROGRAM.

''The Director, in conjunction with the National Academy of Sciences, shall establish and conduct a post-doctoral fellowship program that shall include not less than 20 new fellows per fiscal year. 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.''.

TITLE V—INNOVATION

SEC. 501. OFFICE OF INNOVATION AND ENTREPRENEURSHIP.

Section 25 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3720) is amended—

(1) in subsection (a) by inserting ''with a Director and full-time staff'' after ''Office of Innovation and Entrepreneurship'';

(2) in subsection (b)—

(A) by amending paragraph (3) to read as follows:

''(3) providing access to relevant data, research, and technical assistance on innovation and commercialization, including best practices for university-based incubators and accelerators;'';

(B) by redesignating paragraphs (4) and (5) as paragraphs (6) and (7), respectively; and

(C) by inserting the following after paragraph (3):

''(4) overseeing the implementation of the loan guarantee programs and the Regional Innovation Program established under sections 26 and 27, respectively;

''(5) developing, within 180 days after the date of enactment of the America Competes Reauthorization Act of 2015, and updating at least every 5 years, a strategic plan to guide the activities of the Office of Innovation and Entrepreneurship that shall—

''(A) specify and prioritize near-term and long-term goals, objectives, and policies to accelerate innovation and advance the commercialization of research and development, including federally funded research and development, set forth the anticipated time for achieving the objectives, and identify metrics for use in assessing progress toward such objectives;

''(B) describe how the Department of Commerce is working in conjunction with other Federal agencies to foster innovation and commercialization across the United States; and

''(C) provide a summary of the activities, including the development of metrics to evaluate regional innovation strategies undertaken through the Regional Innovation Research and Information Program established under section 27(e);'';

(3) by amending subsection (c) to read as follows:

''(c) ADVISORY COMMITTEE.—

''(1) ESTABLISHMENT.—The Secretary shall establish or designate an advisory committee, which shall meet at least twice each fiscal year, to provide advice to the Secretary on carrying out the duties and responsibilities of the Office of Innovation and Entrepreneurship.

''(2) REPORT TO CONGRESS.—The advisory committee shall prepare a report, to be submitted to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate every 3 years. The first report shall be submitted not later than 1 year after the date of enactment of the America Competes Reauthorization Act of 2015 and shall include—

''(A) an assessment of the strategic plan developed under subsection (b)(5) and the progress made in implementing the plan and the duties of the Office of Innovation and Entrepreneurship;

''(B) an assessment of how the Office of Innovation and Entrepreneurship is working with other Federal agencies to meet the goals and duties of the office; and

''(C) any recommendations for how the Office of Innovation and Entrepreneurship could be improved.''; and

(4) by adding at the end the following:

''(d) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary $5,000,000 for each of fiscal years 2016 through 2020 to carry out this section.''.

SEC. 502. FEDERAL LOAN GUARANTEES FOR INNOVATIVE TECHNOLOGIES IN MANUFACTURING.

Section 26(t) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3721(t)) is amended by striking ''fiscal years 2011 through 2013'' and inserting ''fiscal years 2016 through 2020''.

SEC. 503. INNOVATION VOUCHER PILOT PROGRAM.

Section 25 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3720) as amended by section 501 of this Act, is further amended by adding at the end the following:

''(e) INNOVATION VOUCHER PILOT PROGRAM.—

''(1) IN GENERAL.—The Secretary, acting through the Office of Innovation and Entrepreneurship and in conjunction with the States, shall establish an innovation voucher pilot program to accelerate innovative activities and enhance the competitiveness of small and medium-sized manufacturers in the United States. The pilot program shall—

''(A) foster collaborations between small and medium-sized manufacturers and research institutions; and

''(B) enable small and medium-sized manufacturers to access technical expertise and capabilities that will lead to the development of innovative products or manufacturing processes, including through—

''(i) research and development, including proof of concept, technical development, and compliance testing activities;

''(ii) early-stage product development, including engineering design services; and

''(iii) technology transfer and related activities.

''(2) AWARD SIZE.—The Secretary shall competitively award vouchers worth up to $20,000 to small and medium-sized manufacturers for use at eligible research institutions to acquire the services described in paragraph (1)(B).

''(3) STREAMLINED PROCEDURES.—The Secretary shall streamline and simplify the application, administrative, and reporting procedures for vouchers administered under the program.

''(4) REGULATIONS.—Prior to awarding any vouchers under the program, the Secretary shall promulgate regulations—

''(A) establishing criteria for the selection of recipients of awards under this subsection;

''(B) establishing procedures regarding financial reporting and auditing—

''(i) to ensure that awards are used for the purposes of the program; and

''(ii) that are in accordance with sound accounting practices; and

''(C) describing any other policies, procedures, or information necessary to implement this subsection, including those intended to streamline and simplify the program in accordance with paragraph (3).

''(5) TRANSFER AUTHORITY.—The Secretary may transfer funds appropriated to the Department of Commerce to other Federal agencies for the performance of services authorized under this subsection.

''(6) ADMINISTRATIVE COSTS.—All of the amounts appropriated to carry out this subsection for a fiscal year shall be used for vouchers awarded under this subsection, except that the Secretary may set aside a percentage of such amounts for eligible research institutions performing the services described in paragraph (1)(B) to defray administrative costs associated with the services. The Secretary shall establish a single, fixed percentage for such purposes that will apply to all eligible research institutions.

''(7) OUTREACH.—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 subsection and to conduct outreach to potential applicants, as appropriate.

''(8) REPORTS TO CONGRESS.—

''(A) PLAN.—Not later than 180 days after the date of enactment of the America Competes Reauthorization Act of 2015, the Secretary shall transmit to Congress a plan that will serve as a guide for the activities of the program. The plan shall include a description of the specific objectives of the program and the metrics that will be used in assessing progress toward those objectives.

''(B) OUTCOMES.—Not later than 3 years after the date of enactment of the America Competes Reauthorization Act of 2015, the Secretary shall transmit to Congress a report containing—

''(i) a summary of the activities carried out under this subsection;

''(ii) an assessment of the impact of such activities on the innovative capacity of small and medium-sized manufacturers receiving assistance under the pilot program; and

''(iii) any recommendations for administrative and legislative action that could optimize the effectiveness of the pilot program.

''(9) COORDINATION AND NONDUPLICATION.—To the maximum extent practicable, the Secretary shall ensure that the activities carried out under this subsection are coordinated with, and do not duplicate the efforts of, other programs within the Federal Government.

''(10) ELIGIBLE RESEARCH INSTITUTIONS DEFINED.—For the purposes of this subsection, the term 'eligible research institution' means—

''(A) an institution of higher education, as such term is defined in section 101(a) of the

Higher Education Act of 1965 (20 U.S.C. 1001(a));

''(B) a Federal laboratory;

''(C) a federally funded research and development center; or

''(D) a Hollings Manufacturing Extension Center established under section 25 of the National Institute of Standards and Technology Act (15 U.S.C. 278k).

''(11) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out the pilot program in this subsection $5,000,000 for each of fiscal years 2016 through 2020.''.

SEC. 504. FEDERAL ACCELERATION OF STATE TECHNOLOGY COMMERCIALIZATION PILOT PROGRAM.

The Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3701 et seq.) is amended by adding at the end the following:

''SEC. 28. FEDERAL ACCELERATION OF STATE TECHNOLOGY COMMERCIALIZATION PILOT PROGRAM.

''(a) AUTHORITY.—

''(1) ESTABLISHMENT.—The Secretary shall establish a Federal Acceleration of State Technology Commercialization Pilot Program or FAST Commercialization Pilot Program to award grants to States, or consortia thereof, for the purposes described in paragraph (2). Awards under this section shall be made through a competitive, merit-based process.

''(2) PURPOSE.—The purpose of the program under this section is to advance United States productivity and global competitiveness by accelerating commercialization of innovative technology by leveraging Federal support for State commercialization efforts. The program shall provide matching funds to a State, or consortium thereof, for the acceleration of commercialization activities and the promotion of small manufacturing enterprises in the United States.

''(b) APPLICATION.—Applications for awards under this section shall be submitted in such a manner, at such a time, and containing such information as the Secretary shall require, including—

''(1) a description of the current state of technology commercialization in the State or States, including successes and barriers to commercialization; and

''(2) a description of the State's or consortium's plan for increasing commercialization of new technologies, products, processes, and services.

''(c) SELECTION CRITERIA.—The Secretary shall establish criteria for the selection of awardees, which shall consider at a minimum a review of efforts during the fiscal year prior to submitting an application to—

''(1) promote manufacturing; and

''(2) commercialize new technologies, products, processes, and services, including activities to translate federally funded research and technologies to small manufacturing enterprises.

''(d) MATCHING REQUIREMENT.—A State or consortium receiving a grant under this section shall provide non-Federal cash contributions in an amount equal to 50 percent of the total cost of the project for which the grant is provided.

''(e) COORDINATION AND NONDUPLICATION.—In carrying out the program under this section, the Secretary shall ensure that grants made under the program are coordinated with, and do not duplicate, the efforts of other commercialization programs within the Federal Government.

''(f) EVALUATION.—

''(1) IN GENERAL.—Not later than 3 years after the date of enactment of the America Competes Reauthorization Act of 2015, 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—

''(A) assess whether the program is achieving its goals;

''(B) include any recommendations for how the program may be improved; and

''(C) include a recommendation as to whether the program should be continued or terminated.

''(g) DEFINITIONS.—In this section—

''(1) the term 'State' has the meaning given that term in section 3 of the Public Works and Economic Development Act of 1965 (42 U.S.C. 3122); and

''(2) the term 'commercialization' has the meaning given that term in section 9(e)(10) of the Small Business Act (15 U.S.C. 638(e)(10)).

''(h) DURATION.—Each award shall be for a 5-year period.

''(i) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary $50,000,000 for each of fiscal years 2016 through 2018 to carry out this section.''.

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 2015''.

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) UNDER SECRETARY.—The term ''Under Secretary'' means the Under Secretary for Science and Energy.

(5) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

SEC. 603. MISSION OF THE OFFICE OF SCIENCE.

Section 209 of the Department of Energy Organization Act (42 U.S.C. 7139) is amended by adding at the end the following:

''(c) 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.

''(d) DUTIES.—In support of this mission, the Director shall carry out programs, including those in 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 activities which range from the study of subatomic particles, atoms, and molecules that make up the materials of our everyday world to the study of 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 and its 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 complex molecular systems and the nanoworld.

''(e) SUPPORTING ACTIVITIES.—The activities described in subsection (d) shall include providing for relevant facilities and infrastructure, programmatic analysis, interagency coordination, and workforce development and outreach activities.

''(f) USER FACILITIES.—

''(1) IN GENERAL.—The Director shall carry out the construction, operation, and maintenance of user facilities, including underground research facilities, to support the activities described in subsection (d). 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.

''(2) COORDINATION WITH OTHER FEDERAL AGENCIES.—The Director may form partnerships to enhance the utilization of and ensure access to user facilities, including underground research facilities, by other Federal agencies.

''(g) OTHER AUTHORIZED ACTIVITIES.—In addition to the activities authorized under the Department of Energy Office of Science Authorization Act of 2015, the Office of Science shall carry out other such activities as it is authorized or required to carry out by law.

''(h) COORDINATION AND JOINT ACTIVITIES WITH OTHER DEPARTMENT OF ENERGY PROGRAMS.—The Under Secretary shall ensure the coordination of activities under the Department of Energy Office of Science Authorization Act of 2015 with the other activities of the Department, and shall support joint activities among the programs of the Department.

''(i) DOMESTIC MANUFACTURING CAPABILITY FOR OFFICE OF SCIENCE FACILITIES REPORT.—Not later than one year after the date of enactment of the Department of Energy Office of Science Authorization Act of 2015, the Secretary shall transmit a report to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate. The report shall—

''(1) assess the current ability of domestic manufacturers to meet the procurement requirements for major ongoing projects funded by the Office of Science, including a calculation of the percentage of equipment acquired from domestic manufacturers for this purpose; and

''(2) identify steps that can be taken by the Federal Government and by private industry to increase the capability of domestic manufacturers to meet procurement requirements of the Office of Science for major projects.''.

SEC. 604. BASIC ENERGY SCIENCES PROGRAM.

(a) PROGRAM.—As part of the activities authorized under the amendment made by 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 and addressing scientific grand challenges.

(b) BASIC ENERGY SCIENCES USER FACILITIES.—

(1) IN GENERAL.—The Director shall carry out a subprogram to support and oversee the construction, operation, and maintenance of national user facilities that 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) nanoscale science research centers; and

(D) other facilities the Director considers appropriate, consistent with section 209(f) of the Department of Energy Organization Act (42 U.S.C. 7139(f)).

(2) FACILITY RESEARCH AND DEVELOPMENT.—The Director shall carry out research and development on advanced accelerator and storage ring technologies relevant to the Basic Energy Sciences user facilities, in consultation with the Office of Science's High Energy Physics and Nuclear Physics programs.

(3) FACILITY CONSTRUCTION AND UPGRADES.—Consistent with the Office of Science's project management practices, the Director shall support construction of—

(A) an upgrade of the Advanced Photon Source to optimize and enhance beam brightness;

(B) a Second Target Station at the Spallation Neutron Source to double user capacity and expand the suite of instruments to meet new scientific challenges;

(C) the Linac Coherent Light Source II to expand the x-ray wavelength range, incorporate high repetition rate operation for soft and medium energy x-rays, and increase user capacity of the Linac Coherent Light Source; and

(D) an upgrade to the Advanced Light Source to improve brightness and performance.

(c) ENERGY FRONTIER RESEARCH CENTERS.—

(1) IN GENERAL.—The Director shall carry out a 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 report of the Department's Basic Energy Sciences Advisory Committee entitled ''From Quanta to the Continuum: Opportunities for Mesoscale Science'';

(C) the Basic Energy Sciences Basic Research Needs workshop report; or

(D) other relevant reports identified by the Director.

(2) COLLABORATIONS.—A collaboration receiving an award 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. An Energy Frontier Research Center already in existence and supported by the Director 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.

(B) REAPPLICATION.—After the end of the period described in subparagraph (A), an awardee may reapply for selection for a second period of 5 years on a competitive, merit-reviewed basis.

(C) TERMINATION.—Consistent with the existing authorities of the Department, the Director may terminate an underperforming center for cause during the performance period.

(4) NO FUNDING FOR CONSTRUCTION.—No funding provided pursuant to this subsection may be used for the construction of new buildings or facilities.

SEC. 605. BIOLOGICAL AND ENVIRONMENTAL RESEARCH.

(a) IN GENERAL.—As part of the activities authorized under section 209 of the Department of Energy Organization Act (42 U.S.C. 7139), and coordinated with the activities authorized under section 604 and section 606, the Director shall carry out a program of research and development in the areas of biological systems science and climate and environmental science, including subsurface 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 and development activities in fundamental, structural, computational, and systems biology to increase systems-level understanding of the 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;

(ii) bioenergy; and

(iii) biobased materials;

(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 transform, immobilize, or remove contaminants from subsurface environments.

(2) BIOENERGY RESEARCH CENTERS.—

(A) IN GENERAL.—In carrying out activities under paragraph (1), the Director shall support at least 3 bioenergy research centers to accelerate advanced research and development of biomass-based liquid transportation fuels, bioenergy, or biobased materials that are produced from a variety of regionally diverse feedstocks.

(B) 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.

(C) RENEWAL.—After the end of the period described in subparagraph (B), an awardee may apply for a second period of 5 years on a merit-reviewed basis.

(D) TERMINATION.—Consistent with the existing authorities of the Department, the Director may terminate an underperforming center for cause during the performance period.

(3) LOW DOSE RADIATION RESEARCH PROGRAM.—

(A) IN GENERAL.—The Director shall carry out a research program on low dose radiation. The purpose of the program is to enhance the scientific understanding of and reduce uncertainties associated with the effects of exposure to low dose radiation in order to inform improved risk management methods.

(B) DEFINITION.—In this paragraph, the term ''low dose radiation'' means a radiation dose of less than 100 millisieverts.

(C) STUDY.—Not later than 60 days after the date of enactment of this Act, the Director shall enter into an agreement with the National Academies to conduct a study assessing the current status and development of a long-term strategy for low dose radiation research. The study shall be conducted in coordination with Federal agencies that perform ionizing radiation effects research.

(D) CONTENTS.—The study performed under subparagraph (C) shall—

(i) identify current scientific challenges for understanding the long-term effects of ionizing radiation;

(ii) assess the status of current low dose radiation research in the United States and internationally;

(iii) formulate overall scientific goals for the future of low-dose radiation research in the United States;

(iv) recommend a long-term strategic and prioritized research agenda to address scientific research goals for overcoming the identified scientific challenges in coordination with other research efforts;

(v) define the essential components of a research program that would address this research agenda within the universities and the National Laboratories; and

(vi) assess the cost-benefit effectiveness of such a program.

(E) 5-YEAR RESEARCH PLAN.—Not later than 90 days after the completion of the assessment performed under subparagraph (C), the Secretary shall deliver to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a five-year research plan that responds to the assessment's findings and recommendations and identifies and prioritizes research needs.

(4) REPEAL.—Section 977 of the Energy Policy Act of 2005 (42 U.S.C. 16317) is repealed.

(c) CLIMATE AND ENVIRONMENTAL SCIENCE ACTIVITIES.—

(1) IN GENERAL.—As part of the activities authorized under subsection (a), and in coordination with activities carried out under subsection (b), the Director shall carry out climate and environmental science research, which shall include activities to—

(A) understand, observe, and model the response of Earth's atmosphere and biosphere to increased concentrations of greenhouse gas emissions and any associated changes in climate;

(B) understand the processes for immobilization, or removal of, and understand the movement of, energy production-derived contaminants such as radionuclides and heavy metals, and understand the process of sequestration and transformation of carbon dioxide in subsurface environments; and

(C) inform potential mitigation and adaptation options for increased concentrations of greenhouse gas emissions and any associated changes in climate.

(2) SUBSURFACE BIOGEOCHEMICAL 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.

(B) COORDINATION.—

(i) DIRECTOR.—The Director shall carry out activities under this paragraph in accordance with priorities established by the Under Secretary to support and accelerate the decontamination of relevant facilities managed by the Department.

(ii) UNDER SECRETARY.—The Under Secretary shall ensure the coordination of activities of the Department, including activities under this paragraph, to support and accelerate the decontamination of relevant facilities managed by the Department.

(3) 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, and Earth models to inform decisions on reducing the impacts of a changing climate. Such modeling shall include, among other critical elements, greenhouse gas emissions, land use, and interaction among human and Earth systems.

SEC. 606. ADVANCED SCIENTIFIC COMPUTING RESEARCH PROGRAM.

(a) IN GENERAL.—As part of the activities authorized under section 209 of the Department of Energy Organization Act (42 U.S.C. 7139), the Director shall carry out a research, development, demonstration, and commercial application program to advance computational and networking capabilities for data-driven discovery and 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.—The Under Secretary 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.—

(1) IN GENERAL.—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 modeling, simulation, and advanced data analytics for basic and applied energy research programs carried out by the Secretary.

(2) REPORT.—Not later than 1 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.

(d) 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)).

(e) EXASCALE COMPUTING PROGRAM.—Section 3 of the Department of Energy High-End Computing Revitalization Act of 2004 (15 U.S.C. 5542) is amended—

(1) in subsection (a)—

(A) in paragraph (1), by striking ''program'' and inserting ''coordinated program across the Department'';

(B) by striking ''and'' at the end of paragraph (1);

(C) by striking the period at the end of paragraph (2) and inserting ''; and''; and

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

''(3) partner with universities, National Laboratories, and industry to ensure the broadest possible application of the technology developed in this program to other challenges in science, engineering, medicine, and industry.'';

(2) in subsection (b)(2), by striking ''vector'' and all that follows through ''architectures'' and inserting ''computer technologies that show promise of substantial reductions in power requirements and substantial gains in parallelism of multicore processors, concurrency, memory and storage, bandwidth, and reliability''; and

(3) by striking subsection (d) and inserting the following:

''(d) EXASCALE COMPUTING PROGRAM.—

''(1) IN GENERAL.—The Secretary shall conduct a coordinated research program to develop exascale computing systems to advance the missions of the Department.

''(2) EXECUTION.—The Secretary shall, through competitive merit review, establish two or more National Laboratory-industry-university partnerships to conduct integrated research, development, and engineering of multiple exascale architectures, and—

''(A) conduct mission-related co-design activities in developing such exascale platforms;

''(B) develop those advancements in hardware and software technology required to fully realize the potential of an exascale production system in addressing Department target applications and solving scientific problems involving predictive modeling and simulation and large-scale data analytics and management; and

''(C) explore the use of exascale computing technologies to advance a broad range of science and engineering.

''(3) ADMINISTRATION.—In carrying out this program, the Secretary shall—

''(A) provide, on a competitive, merit-reviewed basis, access for researchers in United States industry, institutions of higher education, National Laboratories, and other Federal agencies to these exascale systems, as appropriate; and

''(B) conduct outreach programs to increase the readiness for the use of such platforms by domestic industries, including manufacturers.

''(4) REPORTS.—

''(A) INTEGRATED STRATEGY AND PROGRAM MANAGEMENT PLAN.—The Secretary shall submit to Congress, not later than 90 days after the date of enactment of the Department of Energy Office of Science Authorization Act of 2015, a report outlining an integrated strategy and program management plan, including target dates for prototypical and production exascale platforms, interim milestones to reaching these targets, functional requirements, roles and responsibilities of National Laboratories and industry, acquisition strategy, and estimated resources required, to achieve this exascale system capability. The report shall include the Secretary's plan for Departmental organization to manage and execute the Exascale Computing Program, including definition of the roles and responsibilities within the Department to ensure an integrated program across the Department. The report shall also include a plan for ensuring balance and prioritizing across ASCR subprograms in a flat or slow-growth budget environment.

''(B) STATUS REPORTS.—At the time of the budget submission of the Department for each fiscal year, the Secretary shall submit a report to Congress that describes the status of milestones and costs in achieving the objectives of the exascale computing program.

''(C) EXASCALE MERIT REPORT.—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—

''(i) the proposed facility's cost projections and capabilities to significantly accelerate the development of new energy technologies;

''(ii) technical risks and challenges that must be overcome to achieve successful completion and operation of the facility; and

''(iii) an independent 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, including an evaluation of where investments should be made in the system software and algorithms to enable these advances.''.

(f) DEFINITIONS.—Section 2 of the Department of Energy High-End Computing Revitalization Act of 2004 (15 U.S.C. 5541) is amended by striking paragraphs (1) through (5) and inserting the following:

''(1) CO-DESIGN.—The term 'co-design' means the joint development of application algorithms, models, and codes with computer technology architectures and operating systems to maximize effective use of high-end computing systems.

''(2) DEPARTMENT.—The term 'Department' means the Department of Energy.

''(3) EXASCALE.—The term 'exascale' means computing system performance at or near 10 to the 18th power floating point operations per second.

''(4) HIGH-END COMPUTING SYSTEM.—The term 'high-end computing system' means a computing system with performance that substantially exceeds that of systems that are commonly available for advanced scientific and engineering applications.

''(5) LEADERSHIP SYSTEM.—The term 'Leadership System' means a high-end computing system that is among the most advanced in the world in terms of performance in solving scientific and engineering problems.

''(6) INSTITUTION OF HIGHER EDUCATION.—The term 'institution of higher education' has the meaning given the term in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801).

''(7) NATIONAL LABORATORY.—The term 'National Laboratory' has the meaning given the term in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801).

''(8) SECRETARY.—The term 'Secretary' means the Secretary of Energy.

''(9) SOFTWARE TECHNOLOGY.—The term 'software technology' includes optimal algorithms, programming environments, tools, languages, and operating systems for high-end computing systems.''.

SEC. 607. FUSION ENERGY RESEARCH.

(a) PROGRAM.—As part of the activities authorized under section 209 of the Department of Energy Organization Act (42 U.S.C. 7139) and section 972 of the Energy Policy Act of 2005 (42 U.S.C. 16312), 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 to establish 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 understandings of plasmas and matter at very high temperatures and densities for fusion applications and for other plasma science applications.

(b) TOKAMAK RESEARCH AND DEVELOPMENT.—

(1) IN GENERAL.—As part of the program described in subsection (a), the Director shall support research and development activities and facility operations to—

(A) optimize the tokamak approach to fusion energy; and

(B) determine the viability of the tokamak approach to fusion energy to lead to a commercial fusion power plant.

(2) ITER.—

(A) RESPONSIBILITIES.—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 International Fusion Energy Organization for the Joint Implementation of the ITER Project.

(B) REPORT.—Not later than 1 year after the date of enactment of this Act, the Secretary shall submit to Congress a report providing an assessment of—

(i) the most recent schedule for ITER that has been approved by the ITER Council; and

(ii) progress of the ITER Council and the ITER Director-General toward implementation of the recommendations of the Third Biennial International Organization Management Assessment Report.

(C) FAIRNESS IN COMPETITION FOR SOLICITATIONS FOR INTERNATIONAL PROJECT ACTIVITIES.—Section 33 of the Atomic Energy Act of 1954 (42 U.S.C. 2053) is amended by adding at the end the following: ''For purposes of this section, with respect to international research projects, the term 'private facilities or laboratories' shall refer to facilities or laboratories located in the United States.''.

(D) SENSE OF CONGRESS.—It is the sense of Congress that the United States should support a robust, diverse program in addition to meeting its commitments to ITER. It is further the sense of Congress that developing the scientific basis for fusion, providing research results key to the success of ITER, and training the next generation of fusion scientists are of critical importance to the United States and should in no way be diminished by participation of the United States in the ITER project.

(c) 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, laser, and pulsed power fusion systems.

(d) ALTERNATIVE AND ENABLING CONCEPTS.—

(1) IN GENERAL.—As part of the program described in subsection (a), the Director shall support research and development activities and facility operations at United States universities, national laboratories, and private facilities for a portfolio of alternative and enabling fusion energy concepts that may provide solutions to significant challenges to the establishment of a commercial magnetic fusion power plant, prioritized based on the ability of the United States to play a leadership role in the international fusion research community. Fusion energy concepts and activities explored under this paragraph may include—

(A) high magnetic field approaches facilitated by high temperature superconductors;

(B) advanced stellarator concepts;

(C) non-tokamak confinement configurations operating at low magnetic fields;

(D) magnetized target fusion energy concepts;

(E) liquid metals to address issues associated with fusion plasma interactions with the inner wall of the encasing device;

(F) immersion blankets for heat management and fuel breeding;

(G) advanced scientific computing activities: and

(H) other promising fusion energy concepts identified by the Director.

(2) COORDINATION WITH ARPA–E.—The Under Secretary and the Director shall coordinate with the Director of the Advanced Research Projects Agency–Energy (in this paragraph referred to as ''ARPA–E'') to—

(A) assess the potential for any fusion energy project supported by ARPA–E to represent a promising approach to a commercially viable fusion power plant;

(B) determine whether the results of any fusion energy project supported by ARPA–E merit the support of follow-on research activities carried out by the Office of Science; and

(C) avoid unintentional duplication of activities.

(e) FUSION MATERIALS RESEARCH AND DEVELOPMENT.—As part of the activities authorized in section 978 of the Energy Policy Act of 2005 (42 U.S.C. 16318), 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 (g), 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 reactor 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 at the time of this assessment.

(f) GENERAL PLASMA SCIENCE AND APPLICATIONS.—Not later than 2 years after the date of enactment of this Act, the Secretary shall provide to Congress an assessment of opportunities in which the United States can provide world-leading contributions to advancing plasma science and non-fusion energy applications, and identify opportunities for partnering with other Federal agencies both within and outside of the Department of Energy.

(g) IDENTIFICATION OF PRIORITIES.—

(1) REPORT.—Not later than 2 years after the date of enactment of this Act, the Secretary shall transmit to Congress a report on the Department's proposed fusion energy research and development activities over the following 10 years under at least 3 realistic budget scenarios, including a scenario based on 3 percent annual growth in the non-ITER portion of the budget for fusion energy research and development activities. The report shall—

(A) 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;

(B) identify priorities for initiation of facility construction and facility decommissioning under each of those scenarios;

(C) provide a roadmap addressing critical scientific challenges to ensure that within 10 years after the date of enactment of this Act there is sufficient basis to justify and motivate the initiation of an applied fusion energy development program; and

(D) assess the ability of the United States fusion workforce to carry out the activities identified in subparagraphs (A) through (C), including the adequacy of college and university programs to train the leaders and workers of the next generation of fusion energy researchers.

(2) PROCESS.—In order to develop the report required under paragraph (1), the Secretary shall leverage best practices and lessons learned from the process used to develop the most recent report of the Particle Physics Project Prioritization Panel of the High Energy Physics Advisory Panel. No member of the Fusion Energy Sciences Advisory Committee shall be excluded from participating in developing or voting on final approval of the report required under paragraph (1).

SEC. 608. HIGH ENERGY PHYSICS PROGRAM.

(a) IN GENERAL.—As part of the activities authorized under section 209 of the Department of Energy Organization Act (42 U.S.C. 7139), the Director shall carry out a research program on the elementary constituents of matter and energy and the nature of space and time.

(b) ENERGY FRONTIER RESEARCH.—As part of the program described in subsection (a), the Director shall carry out research using high energy accelerators and advanced detectors to create and study interactions of novel particles and investigate fundamental forces.

(c) 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 include collaborations with the National Science Foundation or international collaborations on relevant research projects.

(d) 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 the research priorities identified by the High Energy Physics Advisory Panel or the National Academy of Sciences, and may include—

(1) collaborations with the National Aeronautics and Space Administration, the National Science Foundation, or international collaborations on relevant research projects; and

(2) the development of space-based, land-based, and underground facilities and experiments.

(e) FACILITY CONSTRUCTION AND MAJOR ITEMS OF EQUIPMENT.—Consistent with the Office of Science's project management practices, the Director shall support construction or fabrication of—

(1) an international Long-Baseline Neutrino Facility based in the United States;

(2) the Muon to Electron Conversion Experiment;

(3) Second Generation Dark Matter experiments;

(4) the Dark Energy Spectroscopic Instrument;

(5) the Large Synoptic Survey Telescope camera;

(6) upgrades to components of the Large Hadron Collider; and

(7) other high priority projects recommended in the most recent report of the Particle Physics Project Prioritization Panel of the High Energy Physics Advisory Panel.

(f) ACCELERATOR RESEARCH AND DEVELOPMENT.—As part of the program described in subsection (a), the Director shall carry out research and development in advanced accelerator concepts and technologies, including laser technologies, to reduce the necessary scope and cost for the next generation of particle accelerators, in coordination with the Office of Science's Basic Energy Sciences and Nuclear Physics programs.

(g) 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 209 of the Department of Energy Organization Act (42 U.S.C. 7139), the Director shall carry out a research program, and support relevant facilities, to discover and understand various forms of nuclear matter.

(b) FACILITY CONSTRUCTION.—

(1) IN GENERAL.—Consistent with the Office of Science's project management practices, the Director shall continue to support the construction of the Facility for Rare Isotope Beams.

(2) REPEAL.—Section 981 of the Energy Policy Act of 2005 (42 U.S.C. 16321) is repealed.

(c) ISOTOPE DEVELOPMENT AND PRODUCTION FOR RESEARCH APPLICATIONS.—

(1) IN GENERAL.—The Director shall carry out a program for the production of isotopes

that the Director determines are needed for research and applications, including—

(A) the development of techniques to produce isotopes; and

(B) support for infrastructure required for isotope research and production.

(2) COORDINATION.—In making the determination described in paragraph (1), the Secretary shall—

(A) ensure that isotope production activities do not compete with private industry unless critical national interests necessitate the Federal Government's involvement; and

(B) 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) APPROACH.—In carrying out this section, the Director shall utilize all available approaches and mechanisms, including capital line items, minor construction projects, energy savings performance contracts, utility energy service contracts, alternative financing, and expense funding, as appropriate.

(c) DEFINITION.—The term ''Office of Science laboratory'' means a subset of National Laboratories as defined in section 2(3) of the Energy Policy Act of 2005 (42 U.S.C. 15801) consisting of subparagraphs (A), (B), (C), (D), (F), (K), (L), (M), (P), and (Q).

SEC. 611. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated to the Secretary for the activities of the Office of Science—

(1) $5,339,794,000 for fiscal year 2016;

(2) $5,606,783,700 for fiscal year 2017;

(3) $5,887,122,885 for fiscal year 2018;

(4) $6,181,479,029 for fiscal year 2019; and

(5) $6,490,552,981 for fiscal year 2020.

Subtitle B—ARPA–E

SEC. 621. SHORT TITLE.

This subtitle may be cited as the ''ARPA–E Reauthorization Act of 2015''.

SEC. 622. ARPA–E AMENDMENTS.

Section 5012 of the America COMPETES Act (42 U.S.C. 16538) is amended—

(1) by redesignating subsection (n) as subsection (o) and inserting after subsection (m) the following new subsection:

''(n) PROTECTION OF PROPRIETARY INFORMATION.—The following categories of information collected by the Advanced Research Projects Agency-Energy from recipients of financial assistance awards shall be considered privileged and confidential and not subject to disclosure pursuant to section 552 of title 5, United States Code:

''(1) Plans for commercialization of technologies developed under the award, including business plans, technology to market plans, market studies, and cost and performance models.

''(2) Investments provided to an awardee from third parties, such as venture capital, hedge fund, or private equity firms, including amounts and percentage of ownership of the awardee provided in return for such investments.

''(3) Additional financial support that the awardee plans to invest or has invested into the technology developed under the award, or that the awardee is seeking from third parties.

''(4) Revenue from the licensing or sale of new products or services resulting from the research conducted under the award.''; and

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

(A) striking ''and'' at the end of subparagraph (D);

(B) striking the period at the end of subparagraph (E) and inserting a semicolon; and

(C) adding at the end the following:

''(F) $325,000,000 for fiscal year 2016;

''(G) $341,250,000 for fiscal year 2017;

''(H) $358,312,500 for fiscal year 2018;

''(I) $376,228,125 for fiscal year 2019; and

''(J) $395,039,531 for fiscal year 2020.''.

Subtitle C—Energy Innovation

SEC. 641. ENERGY INNOVATION HUBS.

(a) AUTHORIZATION 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 awards 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.

(2) TECHNOLOGY DEVELOPMENT FOCUS.—The Secretary shall designate for each Hub a unique advanced energy technology 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, Energy Frontier Research Centers, and within industry.

(b) CONSORTIA.—

(1) ELIGIBILITY.—To be eligible to receive an award under this section for the establishment and operation of a Hub, a consortium shall—

(A) be composed of no fewer than 2 qualifying entities; and

(B) operate subject to an 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) a plan for managing intellectual property rights; and

(v) an accounting structure that enables the Secretary to ensure that the consortium has complied with the requirements of this section.

(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 awards for the establishment and operation of Hubs through competitive selection processes. 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. Awards made to a Hub shall be for a period not to exceed 5 years, after which the award may be renewed, subject to a rigorous merit review. A Hub 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 Hub.

(d) HUB OPERATIONS.—

(1) IN GENERAL.—Each Hub shall conduct or provide for multidisciplinary, collaborative research, development, demonstration, and, where appropriate, commercial application of advanced energy technologies within the technology development focus designated 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, and describing each project undertaken by the Hub; and

(D) monitor project implementation and coordination.

(2) CONFLICTS OF INTEREST.—

(A) PROCEDURES.—Hubs shall maintain 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 decision-making capacities disclose all material 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).

(3) PROHIBITION ON CONSTRUCTION.—

(A) 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.

(B) 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 research or for the construction of a test bed or renovations to existing buildings or facilities for the purposes of research if the Secretary determines that the test bed or renovations are limited to a scope and scale necessary for the research to be conducted.

(e) TERMINATION.—Consistent with the existing authorities of the Department, the Secretary may terminate an underperforming Hub for cause during the performance period.

(f) DEFINITIONS.—For purposes of this section:

(1) ADVANCED ENERGY TECHNOLOGY.—The term ''advanced energy technology'' means—

(A) an innovative technology—

(i) that produces energy from solar, wind, geothermal, biomass, tidal, wave, ocean, or other renewable energy resources;

(ii) that produces nuclear energy;

(iii) for carbon capture and sequestration;

(iv) that enables advanced vehicles, vehicle components, and related technologies that result in significant energy savings;

(v) that generates, transmits, distributes, utilizes, or stores energy more efficiently

than conventional technologies, including through Smart Grid technologies; or

(vi) 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;

(B) research, development, demonstration, and commercial application activities necessary to ensure the long-term, secure, and sustainable supply of energy critical elements; or

(C) another innovative energy technology area identified by the Secretary.

(2) ENERGY CRITICAL ELEMENT.—The term ''energy critical element'' means any of a class of chemical elements that have a high risk of a supply disruption and are critical to one or more new, energy-related technologies such that a shortage of such element would significantly inhibit large-scale deployment of technologies that produce, transmit, store, or conserve energy.

(3) HUB.—The term ''Hub'' means an Energy Innovation Hub established or operating in accordance with this section, including any Energy Innovation Hub existing as of the date of enactment of this Act.

(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.

SEC. 642. PARTICIPATION IN THE INNOVATION CORPS PROGRAM.

(a) AGREEMENT.—The Secretary of Energy shall enter into an agreement with the Director of the National Science Foundation to enable researchers funded by the Department of Energy to participate in the Innovation Corps program authorized by section 307.

(b) AUTHORIZATION.—The Secretary of Energy may also establish a Department of Energy Innovation Corps program, modeled after the National Science Foundation Innovation Corps program, to incorporate experts from the Department of Energy National Laboratories in the training curriculum of the program.

SEC. 643. TECHNOLOGY TRANSFER.

(a) REPORT.—Not later than 1 year after the date of enactment of this Act, and annually thereafter, the Secretary of Energy shall transmit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a report which shall include—

(1) an assessment of the Department's current ability to carry out the goals of section 1001 of the Energy Policy Act of 2005 (42 U.S.C. 16391), including an assessment of the role and effectiveness of the Director of the Office of Technology Transitions; and

(2) recommended departmental policy changes and legislative changes to section 1001 of the Energy Policy Act of 2005 (42 U.S.C. 16391) to improve the Department's ability to successfully transfer new energy technologies to the private sector.

(b) AMENDMENTS.—Section 1001 of the Energy Policy Act of 2005 (42 U.S.C. 16391) is amended—

(1) in subsection (e), by striking ''for commercial purposes'' and inserting ''of any sort for commercial purposes, including energy technologies not currently supported by the Department of Energy'';

(2) by redesignating subsections (f) and (g) as subsections (h) and (i), respectively; and

(3) by inserting after subsection (e) the following new subsections:

''(f) AGREEMENTS FOR COMMERCIALIZING TECHNOLOGY PILOT PROGRAM.—

''(1) IN GENERAL.—The Secretary shall carry out the Agreements for Commercializing Technology pilot program of the Department, as announced by the Secretary on December 8, 2011, in accordance with this subsection.

''(2) TERMS.—Each agreement entered into pursuant to the pilot program referred to in paragraph (1) shall provide to the contractor of the applicable National Laboratory, to the maximum extent determined to be appropriate by the Secretary, increased authority to negotiate contract terms, such as intellectual property rights, payment structures, performance guarantees, and multiparty collaborations.

''(3) ELIGIBILITY.—

''(A) IN GENERAL.—Any director of a National Laboratory may enter into an agreement pursuant to the pilot program referred to in paragraph (1).

''(B) AGREEMENTS WITH NON-FEDERAL ENTITIES.—To carry out subparagraph (A) and subject to subparagraph (C), the Secretary shall permit the directors of the National Laboratories to execute agreements with a non-Federal entity, including a non-Federal entity already receiving Federal funding that will be used to support activities under agreements executed pursuant to subparagraph (A), provided that such funding is solely used to carry out the purposes of the Federal award.

''(C) RESTRICTION.—The requirements of chapter 18 of title 35, United States Code (commonly known as the 'Bayh-Dole Act') shall apply if—

''(i) the agreement is a funding agreement (as that term is defined in section 201 of that title); and

''(ii) at least 1 of the parties to the funding agreement is eligible to receive rights under that chapter.

''(4) SUBMISSION TO SECRETARY.—Each affected director of a National Laboratory shall submit to the Secretary, with respect to each agreement entered into under this subsection—

''(A) a summary of information relating to the relevant project;

''(B) the total estimated costs of the project;

''(C) estimated commencement and completion dates of the project; and

''(D) other documentation determined to be appropriate by the Secretary.

''(5) CERTIFICATION.—The Secretary shall require the contractor of the affected National Laboratory to certify that each activity carried out under a project for which an agreement is entered into under this subsection—

''(A) is not in direct competition with the private sector; and

''(B) does not present, or minimizes, any apparent conflict of interest, and avoids or neutralizes any actual conflict of interest, as a result of the agreement under this subsection.

''(6) EXTENSION.—The pilot program referred to in paragraph (1) shall be extended until October 31, 2017.

''(7) REPORTS.—

''(A) OVERALL ASSESSMENT.—Not later than 60 days after the date described in paragraph (6), the Secretary, in coordination with directors of the National Laboratories, shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a report that—

''(i) assesses the overall effectiveness of the pilot program referred to in paragraph (1);

''(ii) identifies opportunities to improve the effectiveness of the pilot program;

''(iii) assesses the potential for program activities to interfere with the responsibilities of the National Laboratories to the Department; and

''(iv) provides a recommendation regarding the future of the pilot program.

''(B) TRANSPARENCY.—The Secretary, in coordination with directors of the National Laboratories, shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate an annual report that accounts for all incidences of, and provides a justification for, non-Federal entities using funds derived from a Federal contract or award to carry out agreements pursuant to this subsection.

''(g) INCLUSION OF TECHNOLOGY MATURATION IN AUTHORIZED TECHNOLOGY TRANSFER ACTIVITIES.—The Secretary shall permit the directors of the National Laboratories to use funds authorized to support technology transfer, following the standard practices of the Department, to carry out technology maturation activities to identify and improve potential commercial application opportunities and demonstrate applications of research and technologies arising from National Laboratory activities.''.

(c) DELEGATION OF AUTHORITY FOR TECHNOLOGY TRANSFER AGREEMENTS.—

(1) AUTHORITY.—The Secretary of Energy shall delegate to directors of the National Laboratories signature authority for any technology transfer agreement with a total cost of not more than $500,000, including both National Laboratory contributions and the project recipient cost share contribution, if such an agreement falls within the scope of a strategic plan for the National Laboratory that has been approved by the Department.

(2) AGREEMENTS INCLUDED.—The agreements to which this subsection applies include—

(A) Cooperative Research and Development Agreements; and

(B) non-Federal Work for Others Agreements.

(3) AVAILABILITY OF RECORDS.—

(A) Not later than 7 days after the date on which the director of a National Laboratory enters into an agreement under this subsection, such director shall submit to the Secretary of Energy for monitoring and review all records of the National Laboratory relating to the agreement.

(B) Not later than 30 days after the date on which the director of a specific National Laboratory enters into an agreement under this subsection, the Secretary may terminate the agreement and the authority of any director of such National Laboratory to enter into agreements under this subsection if—

(i) all records of the National Laboratory relating to the agreement have not been transmitted to the Secretary in accordance with subparagraph (A); or

(ii) the Secretary determines that this agreement is inconsistent with the mission of the Department.

(4) LIMITATION.—This subsection does not apply to any agreement with a majority foreign-owned company.

(5) SUNSET.—

(A) IN GENERAL.—This subsection shall apply only during the 4-year period beginning on the date of enactment of this Act.

(B) ASSESSMENT.—Not later than the date that is 180 days prior to the last day of the period described in subparagraph (A), the Secretary shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate

an assessment of the effectiveness of the authority provided to the directors of the National Laboratories under this subsection to accelerate the development of new technologies, and an assessment of any incidences of potential misuse of this authority in the opinion of the Secretary.

SEC. 644. FUNDING COMPETITIVENESS FOR INSTITUTIONS OF HIGHER EDUCATION AND OTHER NONPROFIT INSTITUTIONS.

Section 988(b) of the Energy Policy Act of 2005 (42 U.S.C. 16352(b)) is amended—

(1) in paragraph (1), by striking ''Except as provided in paragraphs (2) and (3)'' and inserting ''Except as provided in paragraphs (2), (3), and (4)''; and

(2) by adding at the end the following:

''(4) EXEMPTION FOR INSTITUTIONS OF HIGHER EDUCATION AND OTHER NONPROFIT INSTITUTIONS.—

''(A) IN GENERAL.—Paragraph (1) shall not apply to a research or development activity performed by an institution of higher education or nonprofit institution (as defined in section 4 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3703)).

''(B) TERMINATION DATE.—The exemption under subparagraph (A) shall apply during the 6-year period beginning on the date of enactment of this paragraph.''.

SEC. 645. UNDER SECRETARY FOR SCIENCE AND ENERGY.

(a) IN GENERAL.—Section 202(b) of the Department of Energy Organization Act (42 U.S.C. 7132(b)) is amended—

(1) by striking ''Under Secretary for Science'' each place it appears and inserting ''Under Secretary for Science and Energy''; and

(2) in paragraph (4)—

(A) in subparagraph (F), by striking ''and'' at the end;

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

(C) by inserting after subparagraph (G) the following:

''(H) establish appropriate linkages between offices under the jurisdiction of the Under Secretary; and

''(I) perform such functions and duties as the Secretary shall prescribe, consistent with this section.''.

(b) CONFORMING AMENDMENTS.—

(1) Section 3164(b)(1) of the Department of Energy Science Education Enhancement Act (42 U.S.C. 7381a(b)(1)) is amended by striking ''Under Secretary for Science'' and inserting ''Under Secretary for Science and Energy''.

(2) Section 641(h)(2) of the United States Energy Storage Competitiveness Act of 2007 (42 U.S.C. 17231(h)(2)) is amended by striking ''Under Secretary for Science'' and inserting ''Under Secretary for Science and Energy''.

SEC. 646. SPECIAL HIRING AUTHORITY FOR SCIENTIFIC, ENGINEERING, AND PROJECT MANAGEMENT PERSONNEL.

(a) IN GENERAL.—The Under Secretary shall have the authority to—

(1) make appointments of scientific, engineering, and professional personnel, without regard to civil service laws, to assist the Department in meeting specific project or research needs;

(2) fix the basic pay of any employee appointed under this section at a rate to be determined by the Under Secretary at rates not in excess of the Executive Schedule (EX–II) without regard to the civil service laws; and

(3) pay any employee appointed under this section payments in addition to basic pay, except that the total amount of additional payments paid to an employee under this subsection for any 12-month period shall not exceed the least of the following amounts:

(A) $25,000.

(B) The amount equal to 25 percent of the annual rate of basic pay of that employee.

(C) The amount of the limitation that is applicable for a calendar year under section 5307(a)(1) of title 5, United States Code.

(b) TERM.—

(1) IN GENERAL.—The term of any employee appointed under this section shall not exceed 3 years.

(2) TERMINATION.—The Under Secretary shall have the authority to terminate any employee appointed under this section at any time based on performance or changing project or research needs of the Department.

The Acting CHAIR. Pursuant to House Resolution 271, the gentlewoman from Texas (Ms. EDDIE BERNICE JOHNSON) and a Member opposed each will control 10 minutes.

The Chair recognizes the gentlewoman from Texas.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I yield myself such time as I may consume.

Mr. Chairman, so much of today's debate has been about how harmful the underlying legislation is for our Nation and how it violates every one of the principles of the original COMPETES bill. I am now pleased to be offering a positive way forward in the form of a substitute bill cosponsored by every Democratic member of the committee in addition to the minority leader, Mr. HOYER.

I spoke earlier about the history of the COMPETES bill and the principles it has embodied since the Rising Above the Gathering Storm report set us on this path 10 years ago. The substitute amendment, which we introduced as H.R. 1898, stays true to one of these principles.

It sets targets that provide for steady and sustained real growth in funding for our research and development agencies. It makes a strong statement that the U.S. Congress sees funding for research across all fields of basic research as a top national priority. It does not include false and detrimental choices and tradeoffs among different fields of science and engineering. It ensures that scientific experts, not politicians, continue to set priorities for funding within and among different fields of basic research and for individual grants.

The principles embodied in my substitute amendment continue a pact that the Federal Government made with our Nation's great research universities following our victory in World War II and the onset of the space race that led us to the creation of NSF and NASA.

This pact is what has made NSF, the National Institute of Standards and Technology, or NIST, and the Department of Energy among the world's greatest and most admired research agencies.

Specifically, my amendment fully funds these agencies at the fiscal year 2016 request level and continues to provide 5 percent annual increases for 5 years. This modest investment is already a compromise, given the immense economic return on our basic research investments. The original Rising Above the Gathering Storm report called for even greater increases.

My amendment also reauthorizes and fully funds ARPA-E, which was created in the 2007 COMPETES Act and has exceeded every expectation for creating innovative new energy technologies and spurring private sector follow-on investment.

In addition, my amendment authorizes and funds important innovation programs at the Department of Commerce, including an innovation voucher pilot program that will help small- and medium-sized manufacturers across the country grow their businesses and create new jobs.

My amendment fully funds the standards work of NIST, in addition to their work to help accelerate growth in U.S. advanced manufacturing. We need to bring those manufacturing jobs back home, and we need to Make It In America. NIST is an essential partner in this effort.

□ 1745

Finally, my amendment takes seriously the issue of STEM education, including broadening participation in STEM. Our STEM language is not just senses of Congress about how important STEM is and other filler provisions.

Our language directs real important policy changes to help ensure that all U.S. students and researchers have the opportunity to fully develop their talents in STEM and pursue successful STEM careers.

We are facing a demographic imperative. If we do not find a way to turn around the underrepresentation of women and minorities in STEM fields, our Nation will fall well short of the skilled workforce our industries demand. Our substitute puts our money before where our mouth is when it comes to STEM and corrects a glaring deficit in the underlying legislation.

I am proud of my work that I have done on this committee for many years and of the contributions that many of my colleagues made to this substitute amendment. It truly is a COMPETES Reauthorization Act in every way.

I urge my colleagues on both sides of the aisle to carefully consider the fork in the road before us. If you really want to do right by this great Nation and by our children and our grandchildren, you will vote for the substitute amendment and replace the underlying legislation with a positive path forward.

This amendment will open the doors for innovation and education for our Nation's future. It will not be trade, as many have said, that will cause us to lose these jobs; it will be our companies searching around the world looking for talent and innovation.

Look out for America's future. Vote for this amendment.

I reserve the balance of my time

Mr. SMITH of Texas. Mr. Chairman, I claim the time in opposition to the amendment.

The Acting CHAIR. The gentleman is recognized for 10 minutes.

Mr. SMITH of Texas. Mr. Chairman, I oppose the gentlewoman's amendment.

As I mentioned in my opening remarks, I support a responsible and sustainable path forward for U.S. science, research, and development. We must prioritize the areas of basic research to ensure future U.S. economic competitiveness and spur private sector innovation.

This amendment ignores the caps set by the Budget Control Act, which the ranking member herself supported, and ignores the tough choices that must be made to protect the American taxpayer and future generations from more debt. It is irresponsible not to adhere to the Budget Control Act, which was signed into law by President Obama.

The Budget Control Act was a bipartisan agreement that 95 Democrats voted for, including the ranking member. Now, she wants to ignore that particular law. Although many Members would like to see the Budget Control Act replaced, it is the law of the land, and we should abide by it.

Of course, it is easy just to propose more spending, knowing it will sound good, even if it is irresponsible and against the law. In fiscal year 2016 alone, this amendment would increase spending by $600 million over the current level and the underlying bill. The amendment increases spending on later-stage research and technology, best done by the private sector.

Since last Congress, we have worked hard to reach an agreement with the minority on numerous policy issues, and we have accepted many of their provisions and ideas to make this bill stronger.

For example, we strengthened STEM provisions related to a new advisory panel and coordinating office. We also included language in support of NIST that passed the House floor on a bipartisan vote last year.

Also, in title III of the bill are three pieces of bipartisan legislation that passed the Science Committee by voice vote in March. Two of those three pieces of legislation were sponsored by Democrats.

I urge my colleagues to support a balanced approach of fiscal responsibility and targeted investments in priority science and basic research and vote ''no'' on the Democratic substitute. The Democratic substitute ignores the Budget Control Act and does not advance good science in America.

I reserve the balance of my time.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I yield 3 minutes to the gentleman from Illinois (Mr. LIPINSKI).

Mr. LIPINSKI. Mr. Chairman, I thank Ms. JOHNSON for yielding.

I am proud to rise in support of Ms. JOHNSON's amendment in the nature of a substitute, and I am also proud to cosponsor H.R. 1898, which contains the same language, because this alternative is much more in keeping with the principles of the original America COMPETES Act.

Mr. Chairman, in 2007, I served on the conference committee that worked out the House-Senate compromise on the original COMPETES bill. In 2010, I wrote the NSF title on the reauthorization. These are two of my proudest moments in Congress because those were bipartisan bills that set us on a path to continue leading the world in scientific research and innovation for the next generation.

Sadly, in recent years, we have let that progress stall. Make no mistake, other nations are continuing to invest and are continuing to innovate. If we don't come together to send a strong message and provide strong support for scientific research, America will no longer be able to compete.

The COMPETES bill is an investment bill. I understand the threat of our enormous Federal debt; but, without the types of investments that are made in the COMPETES bill, we will not promote the economic growth that we need to end our deficits and pay down our debt.

Ranking Member JOHNSON's alternative makes those investments. Unlike the base bill, it does not make drastic cuts to Advanced Research Projects Agency-Energy, which promotes and funds research and development of advanced energy technologies.

It does not make drastic cuts to the Office of Energy Efficiency and Renewable Energy that invests in high-risk, high-value research and development in the fields of energy efficiency and renewable energy technologies. It doesn't cut the geosciences or make a more than 50 percent cut to research in the social, behavioral, and economic sciences.

Some might think that last one is warranted; but, in the Science Committee, we are constantly hearing from witnesses about how social science is vital to the work going on in other fields. Members of Congress have frequently relied on spectrum auctions, developed by NSF social science research, to raise billions of dollars.

Social science is perhaps the most critical component to preventing cyber crimes. Considering that the majority of all cyber breaches occur because of social factors, like using easy-to-guess passwords or clicking on a link in a phishing attack, we should want to increase funding in these areas.

Mr. Chairman, Ms. JOHNSON's amendment provides robust support in all of these areas. I agree that the chairman's bill has gotten better and things have been added to the bill which have made it a better bill, but still, I think there is no question that Ms. JOHNSON's substitute is a much better bill for making the types of investments we need in scientific research right now if we want to make sure that America still competes. This is critical to the future of our country; this is critical to innovation.

I urge my colleagues to support it.

Mr. SMITH of Texas. Mr. Chairman, I yield 2 minutes to the gentleman from Texas (Mr. BABIN), who is a member of the Science, Space, and Technology Committee.

Mr. BABIN. Mr. Chairman, I rise in opposition to the gentlewoman's amendment.

The gentlewoman's amendment makes everything a priority so that nothing really is. This amendment rubberstamps the administration's budget request, which fails to make choices, spreading a little bit of research funding around to try to please everyone.

Compared to the gentlewoman's proposal, H.R. 1806 funds 329 more new grants in biology next year, 398 more new grants in computer science, 457 more new grants in engineering, and 955 more new grants in math and the physical sciences.

These are research grants that are going to universities and research institutions across the country, fueling innovation and driving economic competitiveness in the United States.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, how much time do I have remaining?

The Acting CHAIR. The gentlewoman from Texas has 1½ minutes remaining.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I yield 1 minute to the gentlewoman from Oregon (Ms. BONAMICI).

Ms. BONAMICI. Mr. Chairman, I thank the gentlewoman for yielding.

I rise today in support of the substitute amendment to H.R. 1806 and focus on one issue. The underlying bill would set a harmful new precedent by authorizing funding at the directorate level.

Currently, funding levels for the National Science Foundation for each directorate are based on strategic priorities and science-based recommendations from the National Science Board. This is how it should be and how it remains under the substitute amendment.

By setting authorization levels according to directorate, this bill would limit the flexibility NSF needs to set strategic priorities and adapt and capitalize on unanticipated discoveries.

I share the concerns of many experts that the underlying bill would reduce authorized funding levels for specific directorates: the Directorate for Social, Behavioral, and Economic Sciences and the Directorate for Geosciences.

Some of this funding has been used, for example, for Oregon State University to conduct research on ocean acidification. It has also been used critically to support the work in Oregon to develop our understanding of the risks posed by a Cascadia subduction zone earthquake. Other examples are around the country.

In summary, the underlying bill diminishes the ability of the National Science Foundation to make strategic science-based decisions.

I urge my colleagues to join me in supporting the substitute amendment.

Mr. SMITH of Texas. Mr. Chairman, we are prepared to close, so I reserve the balance of my time.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I simply will close by saying, as we have been on this floor, we continue to get emails and letters from universities and scientists around this Nation.

I am not presenting this substitute to be funny; I am presenting this substitute to take us to the professional level that the research brought us when we first had America COMPETES. It is not a picking and choosing; it is a professional approach to funding scientific projects.

If we mean to look out for the future of the Nation, as we say we are, this is the legislation that will do it.

I urge everyone to support it, and I yield back the balance of my time.

Mr. SMITH of Texas. Mr. Chairman, the gentlewoman's amendment ignores the law of the land. She and more than 90 other Democrats supported the Budget Control Act, which was signed into law by the President. This amendment ignores those budget caps.

I support a responsible and sustainable path forward for U.S. science, research, and development; but it is neither responsible, nor sustainable, to spend more and more taxpayer dollars and increase the debt that future generations will inherit. We must prioritize the areas of basic research to ensure future economic competitiveness and spur private sector innovation.

Since the last Congress, we have worked hard to reach an agreement with the minority on numerous policy issues, but we have been clear since the beginning that increases in spending need to have reasonable offsets. This amendment fails to include any offsets and openly ignores the Budget Control Act.

I urge my colleagues to support a balanced approach of fiscal responsibility and targeted investments in priority, science, and basic research. Vote ''no'' on the amendment and ''yes'' on the underlying bill.

I yield back the balance of my time.

The Acting CHAIR. The question is on the amendment offered by the gentlewoman from Texas (Ms. EDDIE BERNICE JOHNSON).

The question was taken; and the Acting Chair announced that the noes appeared to have it.

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Chairman, I request a recorded vote.

The Acting CHAIR. Pursuant to clause 6 of rule XVIII, further proceedings on the amendment offered by the gentlewoman from Texas 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 A of House Report 114–120 on which further proceedings were postponed, in the following order:

Amendment No. 2 by Ms. EDDIE BERNICE JOHNSON of Texas.

Amendment No. 6 by Mr. GRIFFITH of Virginia.

Amendment No. 8 by Mr. LOWENTHAL of California.

Amendment No. 10 by Ms. BONAMICI of Oregon.

Amendment No. 11 by Mr. BEYER of Virginia.

Amendment No. 12 by Ms. EDDIE BERNICE JOHNSON of Texas.

The Chair will reduce to 2 minutes the minimum time for any electronic vote after the first vote in this series.

AMENDMENT NO. 2 OFFERED BY MS. EDDIE BERNICE JOHNSON

The Acting CHAIR. The unfinished business is the demand for a recorded vote on the amendment printed in part A of House Report 114–120 offered by the gentlewoman from Texas (Ms. EDDIE BERNICE JOHNSON) 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 vote was taken by electronic device, and there were—ayes 177, noes 243, not voting 12, as follows:

[Roll No. 252]

AYES—177

Adams
Aguilar
Ashford
Bass
Beatty
Becerra
Beyer
Bishop (GA)
Blumenauer
Bonamici
Boyle, Brendan F.
Brady (PA)
Brown (FL)
Brownley (CA)
Bustos
Butterfield
Capuano
Cárdenas
Carney
Cartwright
Castor (FL)
Castro (TX)
Chu, Judy
Cicilline
Clark (MA)
Clarke (NY)
Clay
Cleaver
Clyburn
Cohen
Connolly
Conyers
Cooper
Courtney
Crowley
Cuellar
Cummings
Curbelo (FL)
Davis (CA)
Davis, Danny
DeFazio
DeGette
Delaney
DeLauro
DelBene
DeSaulnier
Deutch
Dingell
Doggett
Dold
Doyle, Michael F.
Duckworth
Edwards
Ellison
Engel
Eshoo
Esty
Farr
Fattah
Foster
Frankel (FL)
Fudge
Gabbard
Gallego
Grayson
Green, Al
Green, Gene
Grijalva
Gutiérrez
Hahn
Hastings
Heck (WA)
Higgins
Himes
Hinojosa
Honda
Hoyer
Huffman
Israel
Jackson Lee
Jeffries
Johnson (GA)
Johnson, E. B.
Kaptur
Keating
Kelly (IL)
Kennedy
Kildee
Kilmer
Kind
Kuster
Langevin
Larsen (WA)
Larson (CT)
Lawrence
Lee
Levin
Lewis
Lieu, Ted
Loebsack
Lofgren
Lowenthal
Lowey
Lujan Grisham (NM)
Luján, Ben Ray (NM)
Lynch
Maloney, Carolyn
Maloney, Sean
Matsui
McCollum
McDermott
McGovern
McNerney
Meeks
Meng
Moore
Moulton
Murphy (FL)
Nadler
Napolitano
Neal
Nolan
Norcross
O'Rourke
Pallone
Pascrell
Payne
Pelosi
Perlmutter
Peters
Pingree
Pocan
Polis
Price (NC)
Quigley
Rangel
Richmond
Roybal-Allard
Ruiz
Rush
Ryan (OH)
Sánchez, Linda T.
Sanchez, Loretta
Sarbanes
Schakowsky
Schiff
Scott (VA)
Scott, David
Serrano
Sewell (AL)
Sherman
Sires
Slaughter
Smith (WA)
Speier
Stivers
Swalwell (CA)
Takai
Takano
Thompson (CA)
Thompson (MS)
Tiberi
Titus
Tonko
Torres
Van Hollen
Vargas
Veasey
Vela
Velázquez
Visclosky
Walz
Waters, Maxine
Watson Coleman
Welch
Wilson (FL)
Yarmuth

NOES—243

Abraham
Aderholt
Allen
Amash
Amodei
Babin
Barletta
Barr
Barton
Benishek
Bilirakis
Bishop (MI)
Bishop (UT)
Black
Blackburn
Blum
Bost
Boustany
Brady (TX)
Brat
Bridenstine
Brooks (AL)
Brooks (IN)
Buchanan
Buck
Bucshon
Burgess
Byrne
Calvert
Carter (GA)
Carter (TX)
Chabot
Clawson (FL)
Coffman
Cole
Collins (GA)
Collins (NY)
Conaway
Cook
Costa
Costello (PA)
Cramer
Crenshaw
Culberson
Davis, Rodney
Denham
Dent
DeSantis
DesJarlais
Diaz-Balart
Duffy
Duncan (SC)
Duncan (TN)
Ellmers (NC)
Emmer (MN)
Farenthold
Fincher
Fitzpatrick
Fleischmann
Fleming
Flores
Forbes
Fortenberry
Foxx
Franks (AZ)
Frelinghuysen
Garamendi
Garrett
Gibbs
Gibson
Gohmert
Goodlatte
Gosar
Gowdy
Graham
Granger
Graves (GA)
Graves (LA)
Graves (MO)
Griffith
Grothman
Guinta
Guthrie
Hanna
Hardy
Harper
Harris
Hartzler
Heck (NV)
Hensarling
Herrera Beutler
Hice, Jody B.
Hill
Holding
Hudson
Huelskamp
Huizenga (MI)
Hultgren
Hunter
Hurd (TX)
Hurt (VA)
Issa
Jenkins (KS)
Jenkins (WV)
Johnson (OH)
Johnson, Sam
Jolly
Jones
Jordan
Joyce
Katko
Kelly (PA)
King (IA)
King (NY)
Kinzinger (IL)
Kline
Knight
LaMalfa
Lamborn
Lance
Latta
Lipinski
LoBiondo
Long
Loudermilk
Love
Lucas
Luetkemeyer
Lummis
MacArthur
Marchant
Marino
Massie
McCarthy
McCaul
McClintock
McHenry
McKinley
McMorris Rodgers
McSally
Meadows
Meehan
Messer
Mica
Miller (FL)
Miller (MI)
Moolenaar
Mooney (WV)
Mullin
Mulvaney
Murphy (PA)
Neugebauer
Newhouse
Nugent
Nunes
Olson
Palazzo
Palmer
Paulsen
Pearce
Perry
Peterson
Pittenger
Pitts
Poe (TX)
Poliquin
Pompeo
Posey
Price, Tom
Ratcliffe
Reed
Reichert
Renacci
Ribble
Rice (NY)
Rice (SC)
Rigell
Roby
Roe (TN)
Rogers (AL)
Rogers (KY)
Rohrabacher
Rokita
Rooney (FL)
Ros-Lehtinen
Roskam
Ross
Rothfus
Rouzer
Royce
Ruppersberger
Russell
Ryan (WI)
Salmon
Sanford
Scalise
Schrader
Schweikert
Scott, Austin
Sensenbrenner
Sessions
Shimkus
Shuster
Simpson
Sinema
Smith (MO)
Smith (NE)
Smith (NJ)
Smith (TX)
Stefanik
Stewart
Stutzman
Thompson (PA)
Thornberry
Tipton
Trott
Turner
Upton
Valadao
Wagner
Walberg
Walden
Walker
Walorski
Walters, Mimi
Weber (TX)
Webster (FL)
Wenstrup
Westerman
Westmoreland
Whitfield
Williams
Wilson (SC)
Wittman
Womack
Woodall
Yoder

Yoho
Young (AK)
Young (IA)
Young (IN)
Zeldin
Zinke

NOT VOTING—12

Bera
Capps
Carson (IN)
Chaffetz
Comstock
Crawford
Donovan
Kirkpatrick
Labrador
Noem
Tsongas
Wasserman Schultz

□ 1827

Messrs. TIPTON, LUCAS, FORBES, McCLINTOCK, and STEWART changed their vote from ''aye'' to ''no.''

Mr. ASHFORD, Ms. DEGETTE, Messrs. STIVERS, YARMUTH, and DOLD changed their vote from ''no'' to ''aye.''

So the amendment was rejected.

The result of the vote was announced as above recorded.

Stated against:

Mrs. COMSTOCK. Mr. Chair, on rollcall No. 252, I was unavoidably detained. Had I been present, I would have voted "no."

AMENDMENT NO. 6 OFFERED BY MR. GRIFFITH

The Acting CHAIR. The unfinished business is the demand for a recorded vote on the amendment printed in part A of House Report 114–120 offered by the gentleman from Virginia (Mr. GRIFFITH) 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 2-minute vote.

The vote was taken by electronic device, and there were—ayes 234, noes 183, not voting 15, as follows:

[Roll No. 253]

AYES—234

Abraham
Aderholt
Allen
Amash
Babin
Barletta
Barr
Barton
Benishek
Bilirakis
Bishop (MI)
Bishop (UT)
Black
Blackburn
Blum
Bost
Boustany
Brady (TX)
Brat
Bridenstine
Brooks (AL)
Brooks (IN)
Buchanan
Buck
Bucshon
Burgess
Byrne
Calvert
Carter (GA)
Carter (TX)
Chabot
Clawson (FL)
Coffman
Cole
Collins (GA)
Collins (NY)
Comstock
Conaway
Cook
Costello (PA)
Cramer
Crenshaw
Culberson
Curbelo (FL)
Davis, Rodney
Denham
Dent
DeSantis
DesJarlais
Diaz-Balart
Dold
Duffy
Duncan (SC)
Duncan (TN)
Ellmers (NC)
Emmer (MN)
Farenthold
Fincher
Fitzpatrick
Fleischmann
Fleming
Flores
Forbes
Fortenberry
Foxx
Franks (AZ)
Frelinghuysen
Garrett
Gibbs
Gohmert
Goodlatte
Gosar
Gowdy
Granger
Graves (GA)
Graves (LA)
Graves (MO)
Griffith
Grothman
Guinta
Guthrie
Hanna
Hardy
Harper
Harris
Hartzler
Heck (NV)
Hensarling
Herrera Beutler
Hice, Jody B.
Hill
Holding
Hudson
Huelskamp
Huizenga (MI)
Hultgren
Hunter
Hurd (TX)
Hurt (VA)
Issa
Jenkins (KS)
Jenkins (WV)
Johnson (OH)
Johnson, Sam
Jolly
Jordan
Joyce
Katko
Kelly (PA)
King (NY)
Kinzinger (IL)
Kline
Knight
Labrador
LaMalfa
Lamborn
Lance
Latta
LoBiondo
Long
Loudermilk
Love
Lucas
Luetkemeyer
Lummis
MacArthur
Marchant
Marino
Massie
McCarthy
McCaul
McClintock
McHenry
McKinley
McMorris Rodgers
McSally
Meadows
Meehan
Messer
Mica
Miller (FL)
Miller (MI)
Moolenaar
Mooney (WV)
Mullin
Mulvaney
Murphy (PA)
Neugebauer
Newhouse
Nugent
Nunes
Olson
Palazzo
Palmer
Paulsen
Pearce
Perry
Pittenger
Pitts
Poe (TX)
Poliquin
Pompeo
Posey
Price, Tom
Ratcliffe
Reed
Reichert
Renacci
Ribble
Rice (SC)
Rigell
Roby
Roe (TN)
Rogers (AL)
Rogers (KY)
Rohrabacher
Rooney (FL)
Ros-Lehtinen
Roskam
Ross
Rothfus
Rouzer
Royce
Russell
Ryan (WI)
Salmon
Sanford
Scalise
Schweikert
Scott, Austin
Sensenbrenner
Sessions
Shimkus
Shuster
Simpson
Smith (MO)
Smith (NE)
Smith (NJ)
Smith (TX)
Stefanik
Stewart
Stivers
Stutzman
Thompson (PA)
Thornberry
Tiberi
Tipton
Trott
Turner
Upton
Valadao
Wagner
Walberg
Walden
Walker
Walorski
Walters, Mimi
Weber (TX)
Webster (FL)
Wenstrup
Westerman
Westmoreland
Whitfield
Williams
Wilson (SC)
Wittman
Womack
Woodall
Yoder
Yoho
Young (AK)
Young (IA)
Young (IN)
Zinke

NOES—183

Adams
Aguilar
Ashford
Bass
Beatty
Beyer
Bishop (GA)
Blumenauer
Bonamici
Boyle, Brendan F.
Brady (PA)
Brown (FL)
Brownley (CA)
Bustos
Butterfield
Capuano
Cárdenas
Carney
Cartwright
Castor (FL)
Castro (TX)
Chu, Judy
Cicilline
Clark (MA)
Clarke (NY)
Clay
Cleaver
Clyburn
Cohen
Connolly
Conyers
Cooper
Costa
Courtney
Crowley
Cuellar
Cummings
Davis (CA)
Davis, Danny
DeFazio
DeGette
Delaney
DeLauro
DelBene
DeSaulnier
Deutch
Dingell
Doyle, Michael F.
Duckworth
Edwards
Ellison
Engel
Eshoo
Esty
Farr
Fattah
Foster
Frankel (FL)
Fudge
Gabbard
Gallego
Garamendi
Gibson
Graham
Grayson
Green, Al
Green, Gene
Grijalva
Gutiérrez
Hahn
Hastings
Heck (WA)
Higgins
Himes
Hinojosa
Honda
Hoyer
Huffman
Israel
Jackson Lee
Jeffries
Johnson (GA)
Johnson, E. B.
Jones
Kaptur
Keating
Kelly (IL)
Kennedy
Kildee
Kilmer
Kind
Kirkpatrick
Kuster
Langevin
Larsen (WA)
Larson (CT)
Lawrence
Lee
Levin
Lewis
Lieu, Ted
Lipinski
Loebsack
Lofgren
Lowenthal
Lowey
Lujan Grisham (NM)
Luján, Ben Ray (NM)
Lynch
Maloney, Carolyn
Maloney, Sean
Matsui
McCollum
McDermott
McGovern
McNerney
Meeks
Meng
Moore
Moulton
Murphy (FL)
Nadler
Napolitano
Neal
Nolan
Norcross
O'Rourke
Pallone
Pascrell
Payne
Pelosi
Perlmutter
Peters
Peterson
Pingree
Pocan
Polis
Price (NC)
Quigley
Rangel
Rice (NY)
Richmond
Roybal-Allard
Ruiz
Ruppersberger
Rush
Ryan (OH)
Sánchez, Linda T.
Sanchez, Loretta
Sarbanes
Schakowsky
Schiff
Scott (VA)
Scott, David
Serrano
Sewell (AL)
Sherman
Sinema
Sires
Slaughter
Smith (WA)
Speier
Swalwell (CA)
Takai
Takano
Thompson (CA)
Thompson (MS)
Titus
Tonko
Torres
Van Hollen
Vargas
Veasey
Vela
Velázquez
Visclosky
Walz
Waters, Maxine
Watson Coleman
Welch
Wilson (FL)
Yarmuth
Zeldin

NOT VOTING—15

Amodei
Becerra
Bera
Capps
Carson (IN)
Chaffetz
Crawford
Doggett
Donovan
King (IA)
Noem
Rokita
Schrader
Tsongas
Wasserman Schultz

ANNOUNCEMENT BY THE ACTING CHAIR

The Acting CHAIR (during the vote). There is 1 minute remaining.

□ 1831

So the amendment was agreed to.

The result of the vote was announced as above recorded.

AMENDMENT NO. 8 OFFERED BY MR. LOWENTHAL

The Acting CHAIR. The unfinished business is the demand for a recorded vote on the amendment printed in part A of House Report 114–120 offered by the gentleman from California (Mr. LOWENTHAL) 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 2-minute vote.

The vote was taken by electronic device, and there were—ayes 187, noes 236, not voting 9, as follows:

[Roll No. 254]

AYES—187

Adams
Aguilar
Ashford
Bass
Beatty
Beyer
Bishop (GA)
Blumenauer
Bonamici
Boyle, Brendan F.
Brady (PA)
Brown (FL)
Brownley (CA)
Bustos
Butterfield
Capuano
Cárdenas
Carney
Carson (IN)
Cartwright
Castor (FL)
Castro (TX)
Chu, Judy
Cicilline
Clark (MA)
Clarke (NY)
Clay
Cleaver
Clyburn
Cohen
Connolly
Conyers
Cooper
Costa
Courtney
Crowley
Cuellar
Cummings
Curbelo (FL)
Davis (CA)
Davis, Danny
DeFazio
DeGette
Delaney
DeLauro
DelBene
DeSaulnier
Deutch
Dingell
Doggett
Dold
Doyle, Michael F.
Duckworth
Edwards
Ellison
Engel
Eshoo
Esty
Farr
Fattah
Foster
Frankel (FL)
Fudge
Gabbard
Gallego
Garamendi
Gibson
Graham
Grayson
Green, Al
Green, Gene
Grijalva
Gutiérrez
Hahn
Hastings
Heck (WA)
Higgins
Himes
Hinojosa
Honda
Hoyer
Huffman
Israel
Jackson Lee
Jeffries
Johnson (GA)
Johnson, E. B.
Kaptur
Keating
Kelly (IL)
Kennedy
Kildee
Kilmer
Kind
Kirkpatrick
Kuster
Langevin
Larsen (WA)
Larson (CT)
Lawrence
Lee
Levin
Lewis
Lieu, Ted
Lipinski
Loebsack
Lofgren
Lowenthal
Lowey
Lujan Grisham (NM)
Luján, Ben Ray (NM)
Lynch
Maloney, Carolyn
Maloney, Sean
Matsui
McCollum
McDermott
McGovern

McNerney
Meeks
Meng
Moore
Moulton
Murphy (FL)
Nadler
Napolitano
Neal
Nolan
Norcross
O'Rourke
Pallone
Pascrell
Payne
Pelosi
Perlmutter
Peters
Pingree
Pocan
Polis
Price (NC)
Quigley
Rangel
Reichert
Rice (NY)
Richmond
Ros-Lehtinen
Roybal-Allard
Ruiz
Ruppersberger
Rush
Ryan (OH)
Sánchez, Linda T.
Sanchez, Loretta
Sarbanes
Schakowsky
Schiff
Schrader
Scott (VA)
Scott, David
Serrano
Sewell (AL)
Sherman
Sinema
Sires
Slaughter
Smith (WA)
Speier
Swalwell (CA)
Takai
Takano
Thompson (CA)
Thompson (MS)
Titus
Tonko
Torres
Van Hollen
Vargas
Veasey
Vela
Velázquez
Visclosky
Walz
Waters, Maxine
Watson Coleman
Welch
Wilson (FL)
Yarmuth

NOES—236

Abraham
Aderholt
Allen
Amash
Amodei
Babin
Barletta
Barr
Barton
Benishek
Bilirakis
Bishop (MI)
Bishop (UT)
Black
Blackburn
Blum
Bost
Boustany
Brady (TX)
Brat
Bridenstine
Brooks (AL)
Brooks (IN)
Buchanan
Buck
Bucshon
Burgess
Byrne
Calvert
Carter (GA)
Carter (TX)
Chabot
Clawson (FL)
Coffman
Cole
Collins (GA)
Collins (NY)
Comstock
Conaway
Cook
Costello (PA)
Cramer
Crenshaw
Culberson
Davis, Rodney
Denham
Dent
DeSantis
DesJarlais
Diaz-Balart
Duffy
Duncan (SC)
Duncan (TN)
Ellmers (NC)
Emmer (MN)
Farenthold
Fincher
Fitzpatrick
Fleischmann
Fleming
Flores
Forbes
Fortenberry
Foxx
Franks (AZ)
Frelinghuysen
Garrett
Gibbs
Gohmert
Goodlatte
Gosar
Gowdy
Granger
Graves (GA)
Graves (LA)
Graves (MO)
Griffith
Grothman
Guinta
Guthrie
Hanna
Hardy
Harper
Harris
Hartzler
Heck (NV)
Hensarling
Herrera Beutler
Hice, Jody B.
Hill
Holding
Hudson
Huelskamp
Huizenga (MI)
Hultgren
Hunter
Hurd (TX)
Hurt (VA)
Issa
Jenkins (KS)
Jenkins (WV)
Johnson (OH)
Johnson, Sam
Jolly
Jones
Jordan
Joyce
Katko
Kelly (PA)
King (IA)
King (NY)
Kinzinger (IL)
Kline
Knight
Labrador
LaMalfa
Lamborn
Lance
Latta
LoBiondo
Long
Loudermilk
Love
Lucas
Luetkemeyer
Lummis
MacArthur
Marchant
Marino
Massie
McCarthy
McCaul
McClintock
McHenry
McKinley
McMorris Rodgers
McSally
Meadows
Meehan
Messer
Mica
Miller (FL)
Miller (MI)
Moolenaar
Mooney (WV)
Mullin
Mulvaney
Murphy (PA)
Neugebauer
Newhouse
Nugent
Nunes
Olson
Palazzo
Palmer
Paulsen
Pearce
Perry
Peterson
Pittenger
Pitts
Poe (TX)
Poliquin
Pompeo
Posey
Price, Tom
Ratcliffe
Reed
Renacci
Ribble
Rice (SC)
Rigell
Roby
Roe (TN)
Rogers (AL)
Rogers (KY)
Rohrabacher
Rokita
Rooney (FL)
Roskam
Ross
Rothfus
Rouzer
Royce
Russell
Ryan (WI)
Salmon
Sanford
Scalise
Schweikert
Scott, Austin
Sensenbrenner
Sessions
Shimkus
Shuster
Simpson
Smith (MO)
Smith (NE)
Smith (NJ)
Smith (TX)
Stefanik
Stewart
Stivers
Stutzman
Thompson (PA)
Thornberry
Tiberi
Tipton
Trott
Turner
Upton
Valadao
Wagner
Walberg
Walden
Walker
Walorski
Walters, Mimi
Weber (TX)
Webster (FL)
Wenstrup
Westerman
Westmoreland
Whitfield
Williams
Wilson (SC)
Wittman
Womack
Woodall
Yoder
Yoho
Young (AK)
Young (IA)
Young (IN)
Zeldin
Zinke

NOT VOTING—9

Becerra
Bera
Capps
Chaffetz
Crawford
Donovan
Noem
Tsongas
Wasserman Schultz

ANNOUNCEMENT BY THE ACTING CHAIR

The Acting CHAIR (during the vote). There is 1 minute remaining.

□ 1835

So the amendment was rejected.

The result of the vote was announced as above recorded.

AMENDMENT NO. 10 OFFERED BY MS. BONAMICI

The Acting CHAIR. The unfinished business is the demand for a recorded vote on the amendment printed in part A of House Report 114–120 offered by the gentlewoman from Oregon (Ms. BONAMICI) 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 will be a 2-minute vote.

The vote was taken by electronic device, and there were—ayes 208, noes 215, not voting 9, as follows:

[Roll No. 255]

AYES—208

Adams
Aguilar
Ashford
Bass
Beatty
Beyer
Bishop (GA)
Blum
Blumenauer
Bonamici
Bost
Boyle, Brendan F.
Brady (PA)
Brown (FL)
Brownley (CA)
Bustos
Butterfield
Capuano
Cárdenas
Carney
Carson (IN)
Cartwright
Castor (FL)
Castro (TX)
Chu, Judy
Cicilline
Clark (MA)
Clarke (NY)
Clay
Cleaver
Clyburn
Cohen
Connolly
Conyers
Cooper
Costa
Courtney
Crowley
Cuellar
Cummings
Curbelo (FL)
Davis (CA)
Davis, Danny
Davis, Rodney
DeFazio
DeGette
Delaney
DeLauro
DelBene
DeSaulnier
Deutch
Dingell
Doggett
Dold
Doyle, Michael F.
Duckworth
Edwards
Ellison
Emmer (MN)
Engel
Eshoo
Esty
Farr
Fattah
Fitzpatrick
Fortenberry
Foster
Frankel (FL)
Fudge
Gabbard
Gallego
Garamendi
Gibson
Graham
Grayson
Green, Al
Green, Gene
Grijalva
Gutiérrez
Hahn
Hastings
Heck (WA)
Herrera Beutler
Higgins
Himes
Hinojosa
Honda
Hoyer
Huffman
Israel
Jackson Lee
Jeffries
Johnson (GA)
Johnson, E. B.
Jones
Kaptur
Keating
Kelly (IL)
Kennedy
Kildee
Kilmer
Kind
King (IA)
Kinzinger (IL)
Kirkpatrick
Kuster
Lance
Langevin
Larsen (WA)
Larson (CT)
Lawrence
Lee
Levin
Lewis
Lieu, Ted
Lipinski
LoBiondo
Loebsack
Lofgren
Lowenthal
Lowey
Lujan Grisham (NM)
Luján, Ben Ray (NM)
Lynch
Maloney, Carolyn
Maloney, Sean
Matsui
McCollum
McDermott
McGovern
McMorris Rodgers
McNerney
Meeks
Meng
Moore
Moulton
Murphy (FL)
Nadler
Napolitano
Neal
Newhouse
Nolan
Norcross
O'Rourke
Pallone
Pascrell
Payne
Pelosi
Perlmutter
Peters
Peterson
Pingree
Pocan
Polis
Price (NC)
Quigley
Rangel
Reichert
Rice (NY)
Richmond
Rokita
Roybal-Allard
Ruiz
Ruppersberger
Rush
Ryan (OH)
Salmon
Sánchez, Linda T.
Sanchez, Loretta
Sarbanes
Schakowsky
Schiff
Schrader
Scott (VA)
Scott, David
Serrano
Sewell (AL)
Sherman
Sinema
Sires
Slaughter
Smith (NE)
Smith (WA)
Speier
Stefanik
Stewart
Swalwell (CA)
Takai
Takano
Thompson (CA)
Thompson (MS)
Titus
Tonko
Torres
Van Hollen
Vargas
Veasey
Vela
Velázquez
Visclosky
Walz
Waters, Maxine
Watson Coleman
Welch
Wilson (FL)
Yarmuth
Yoder
Young (IA)

NOES—215

Abraham
Aderholt
Allen
Amash
Amodei
Babin
Barletta
Barr
Barton
Benishek
Bilirakis
Bishop (MI)
Bishop (UT)
Black
Blackburn
Boustany
Brady (TX)
Brat
Bridenstine
Brooks (AL)
Brooks (IN)
Buchanan
Buck
Bucshon
Burgess
Byrne
Calvert
Carter (GA)
Carter (TX)
Chabot
Clawson (FL)
Coffman
Cole
Collins (GA)
Collins (NY)
Comstock
Conaway
Cook
Costello (PA)
Cramer
Crenshaw
Culberson
Denham
Dent
DeSantis
DesJarlais
Diaz-Balart
Duffy
Duncan (SC)
Duncan (TN)
Ellmers (NC)
Farenthold
Fincher
Fleischmann
Fleming
Flores
Forbes
Foxx
Franks (AZ)
Frelinghuysen
Garrett
Gibbs
Gohmert
Goodlatte
Gosar
Gowdy
Granger
Graves (GA)
Graves (LA)
Graves (MO)
Griffith
Grothman
Guinta
Guthrie
Hanna
Hardy
Harper
Harris
Hartzler
Heck (NV)
Hensarling
Hice, Jody B.
Hill
Holding
Hudson
Huelskamp
Huizenga (MI)
Hultgren
Hunter
Hurd (TX)
Hurt (VA)
Issa
Jenkins (KS)
Jenkins (WV)
Johnson (OH)
Johnson, Sam
Jolly
Jordan
Joyce
Katko
Kelly (PA)
King (NY)
Kline
Knight
Labrador
LaMalfa
Lamborn
Latta
Long
Loudermilk
Love
Lucas
Luetkemeyer
Lummis
MacArthur
Marchant
Marino
Massie
McCarthy
McCaul
McClintock
McHenry
McKinley
McSally
Meadows
Meehan
Messer
Mica
Miller (FL)
Miller (MI)
Moolenaar
Mooney (WV)
Mullin
Mulvaney
Murphy (PA)
Neugebauer
Nugent
Nunes
Olson
Palazzo
Palmer
Paulsen
Pearce
Perry
Pittenger
Pitts
Poe (TX)
Poliquin
Pompeo
Posey
Price, Tom
Ratcliffe
Reed
Renacci
Ribble
Rice (SC)
Rigell
Roby
Roe (TN)
Rogers (AL)
Rogers (KY)
Rohrabacher
Rooney (FL)
Ros-Lehtinen
Roskam
Ross
Rothfus
Rouzer
Royce
Russell
Ryan (WI)
Sanford
Scalise
Schweikert
Scott, Austin
Sensenbrenner
Sessions
Shimkus
Shuster
Simpson
Smith (MO)
Smith (NJ)
Smith (TX)
Stivers
Stutzman
Thompson (PA)
Thornberry
Tiberi
Tipton
Trott
Turner
Upton
Valadao
Wagner
Walberg
Walden
Walker
Walorski
Walters, Mimi
Weber (TX)
Webster (FL)
Wenstrup
Westerman
Westmoreland
Whitfield
Williams
Wilson (SC)

Wittman
Womack
Woodall
Yoho
Young (AK)
Young (IN)
Zeldin
Zinke

NOT VOTING—9

Becerra
Bera
Capps
Chaffetz
Crawford
Donovan
Noem
Tsongas
Wasserman Schultz

□ 1840

Mr. EMMER of Minnesota and Ms. KAPTUR changed their vote from ''no'' to ''aye.''

So the amendment was rejected.

The result of the vote was announced as above recorded.

AMENDMENT NO. 11 OFFERED BY MR. BEYER

The Acting CHAIR. The unfinished business is the demand for a recorded vote on the amendment printed in part A of House Report 114–120 offered by the gentleman from Virginia (Mr. BEYER) 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 2-minute vote.

The vote was taken by electronic device, and there were—ayes 190, noes 232, not voting 10, as follows:

[Roll No. 256]

AYES—190

Adams
Aguilar
Ashford
Bass
Beatty
Beyer
Bishop (GA)
Blumenauer
Bonamici
Boyle, Brendan F.
Brady (PA)
Brown (FL)
Brownley (CA)
Bustos
Butterfield
Capuano
Cárdenas
Carney
Carson (IN)
Cartwright
Castor (FL)
Castro (TX)
Chu, Judy
Cicilline
Clark (MA)
Clarke (NY)
Clay
Cleaver
Clyburn
Cohen
Connolly
Conyers
Cooper
Costa
Courtney
Crowley
Cuellar
Cummings
Curbelo (FL)
Davis (CA)
Davis, Danny
DeFazio
DeGette
Delaney
DeLauro
DelBene
DeSaulnier
Deutch
Dingell
Doggett
Dold
Doyle, Michael F.
Duckworth
Edwards
Ellison
Engel
Eshoo
Esty
Farr
Fattah
Foster
Frankel (FL)
Fudge
Gabbard
Gallego
Garamendi
Gibson
Graham
Grayson
Green, Al
Green, Gene
Grijalva
Gutiérrez
Hahn
Hastings
Heck (WA)
Higgins
Himes
Hinojosa
Honda
Hoyer
Huffman
Israel
Jackson Lee
Jeffries
Johnson (GA)
Johnson, E. B.
Kaptur
Katko
Keating
Kelly (IL)
Kennedy
Kildee
Kilmer
Kind
Kirkpatrick
Kuster
Langevin
Larsen (WA)
Larson (CT)
Lawrence
Lee
Levin
Lewis
Lieu, Ted
Lipinski
Loebsack
Lofgren
Lowenthal
Lowey
Lujan Grisham (NM)
Luján, Ben Ray (NM)
Lynch
Maloney, Carolyn
Maloney, Sean
Matsui
McCollum
McDermott
McGovern
McNerney
Meeks
Meng
Moore
Moulton
Murphy (FL)
Nadler
Napolitano
Neal
Nolan
Norcross
O'Rourke
Pallone
Pascrell
Payne
Pelosi
Perlmutter
Peters
Peterson
Pingree
Pocan
Polis
Price (NC)
Quigley
Rangel
Rice (NY)
Richmond
Roybal-Allard
Ruiz
Ruppersberger
Rush
Ryan (OH)
Sánchez, Linda T.
Sanchez, Loretta
Sarbanes
Schakowsky
Schiff
Schrader
Scott (VA)
Scott, David
Serrano
Sewell (AL)
Sherman
Sinema
Sires
Slaughter
Smith (WA)
Speier
Stefanik
Stewart
Swalwell (CA)
Takai
Takano
Thompson (CA)
Thompson (MS)
Thompson (PA)
Titus
Tonko
Torres
Van Hollen
Vargas
Veasey
Vela
Velázquez
Visclosky
Walz
Waters, Maxine
Watson Coleman
Welch
Wilson (FL)
Yarmuth

NOES—232

Abraham
Aderholt
Allen
Amash
Amodei
Babin
Barletta
Barr
Barton
Benishek
Bilirakis
Bishop (MI)
Bishop (UT)
Black
Blackburn
Blum
Bost
Boustany
Brady (TX)
Brat
Bridenstine
Brooks (AL)
Brooks (IN)
Buchanan
Buck
Bucshon
Burgess
Byrne
Calvert
Carter (GA)
Carter (TX)
Chabot
Clawson (FL)
Coffman
Cole
Collins (GA)
Collins (NY)
Comstock
Conaway
Cook
Costello (PA)
Cramer
Crenshaw
Culberson
Davis, Rodney
Denham
Dent
DeSantis
DesJarlais
Diaz-Balart
Duffy
Duncan (SC)
Duncan (TN)
Ellmers (NC)
Emmer (MN)
Farenthold
Fincher
Fitzpatrick
Fleischmann
Fleming
Flores
Forbes
Fortenberry
Foxx
Franks (AZ)
Frelinghuysen
Garrett
Gibbs
Gohmert
Goodlatte
Gosar
Gowdy
Granger
Graves (GA)
Graves (LA)
Graves (MO)
Griffith
Grothman
Guinta
Guthrie
Hanna
Hardy
Harper
Harris
Hartzler
Heck (NV)
Hensarling
Herrera Beutler
Hice, Jody B.
Hill
Holding
Hudson
Huelskamp
Huizenga (MI)
Hultgren
Hunter
Hurd (TX)
Hurt (VA)
Issa
Jenkins (KS)
Jenkins (WV)
Johnson (OH)
Johnson, Sam
Jolly
Jones
Jordan
Joyce
Kelly (PA)
King (IA)
King (NY)
Kinzinger (IL)
Kline
Knight
Labrador
LaMalfa
Lamborn
Lance
Latta
LoBiondo
Long
Loudermilk
Love
Lucas
Luetkemeyer
Lummis
MacArthur
Marchant
Marino
Massie
McCarthy
McCaul
McClintock
McHenry
McKinley
McMorris Rodgers
McSally
Meadows
Meehan
Messer
Mica
Miller (FL)
Miller (MI)
Moolenaar
Mooney (WV)
Mullin
Mulvaney
Murphy (PA)
Neugebauer
Newhouse
Nugent
Nunes
Olson
Palazzo
Palmer
Paulsen
Pearce
Perry
Pittenger
Pitts
Poe (TX)
Poliquin
Pompeo
Posey
Price, Tom
Ratcliffe
Reed
Reichert
Renacci
Ribble
Rice (SC)
Rigell
Roby
Roe (TN)
Rogers (AL)
Rogers (KY)
Rohrabacher
Rokita
Rooney (FL)
Ros-Lehtinen
Roskam
Ross
Rothfus
Rouzer
Royce
Russell
Ryan (WI)
Salmon
Sanford
Scalise
Schweikert
Scott, Austin
Sensenbrenner
Sessions
Shimkus
Shuster
Simpson
Smith (MO)
Smith (NE)
Smith (NJ)
Smith (TX)
Stutzman
Thornberry
Tiberi
Tipton
Trott
Turner
Upton
Valadao
Wagner
Walberg
Walden
Walker
Walorski
Walters, Mimi
Weber (TX)
Webster (FL)
Wenstrup
Westerman
Westmoreland
Whitfield
Williams
Wilson (SC)
Wittman
Womack
Woodall
Yoder
Yoho
Young (AK)
Young (IA)
Young (IN)
Zeldin
Zinke

NOT VOTING—10

Becerra
Bera
Capps
Chaffetz
Crawford
Donovan
Noem
Stivers
Tsongas
Wasserman Schultz

□ 1844

So the amendment was rejected.

The result of the vote was announced as above recorded.

AMENDMENT NO. 12 OFFERED BY MS. EDDIE BERNICE JOHNSON OF TEXAS

The Acting CHAIR. The unfinished business is the demand for a recorded vote on the amendment printed in part A of House Report 114–120 offered by the gentlewoman from Texas (Ms. EDDIE BERNICE JOHNSON) 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 2-minute vote.

The vote was taken by electronic device, and there were—ayes 179, noes 239, not voting 14, as follows:

[Roll No. 257]

AYES—179

Adams
Aguilar
Bass
Beatty
Beyer
Bishop (GA)
Blumenauer
Bonamici
Boyle, Brendan F.
Brady (PA)
Brown (FL)
Brownley (CA)
Bustos
Butterfield
Capuano
Cárdenas
Carney
Carson (IN)
Cartwright
Castor (FL)
Castro (TX)
Chu, Judy
Cicilline
Clark (MA)
Clarke (NY)
Clay
Cleaver
Clyburn
Cohen
Connolly
Conyers
Cooper
Costa
Courtney
Crowley
Cuellar
Cummings
Davis (CA)
Davis, Danny
DeFazio
DeGette
Delaney
DeLauro
DelBene
DeSaulnier
Deutch
Dingell
Doggett
Doyle, Michael F.
Duckworth
Edwards
Ellison
Engel
Eshoo
Esty
Farr
Fattah
Foster
Frankel (FL)
Fudge
Gabbard
Gallego
Garamendi
Graham
Grayson
Green, Al
Green, Gene
Grijalva
Gutiérrez
Hahn
Hastings
Heck (WA)
Higgins
Himes
Hinojosa
Honda
Hoyer
Huffman
Israel
Jackson Lee
Jeffries
Johnson (GA)
Johnson, E. B.
Kaptur
Keating
Kelly (IL)
Kennedy
Kildee
Kilmer
Kind
Kirkpatrick
Kuster
Langevin
Larsen (WA)
Larson (CT)
Lawrence
Lee
Levin
Lewis
Lieu, Ted
Lipinski
Loebsack
Lofgren
Lowenthal
Lowey
Lujan Grisham (NM)
Luján, Ben Ray (NM)
Lynch
Maloney, Carolyn
Maloney, Sean
Matsui
McCollum
McDermott
McGovern
McNerney
Meeks
Meng
Moore
Moulton
Murphy (FL)
Nadler
Napolitano
Neal
Nolan
Norcross
O'Rourke
Pallone
Pascrell
Payne
Pelosi
Perlmutter
Peters
Peterson
Pingree
Pocan
Polis
Price (NC)
Quigley
Rangel
Rice (NY)
Richmond
Ruiz
Ruppersberger
Ryan (OH)
Sánchez, Linda T.
Sanchez, Loretta
Sarbanes
Schakowsky
Schiff
Schrader
Scott (VA)
Scott, David
Serrano

Sewell (AL)
Sinema
Sires
Slaughter
Smith (WA)
Speier
Swalwell (CA)
Takai
Takano
Thompson (CA)
Thompson (MS)
Titus
Tonko
Torres
Van Hollen
Vargas
Veasey
Vela
Velázquez
Visclosky
Walz
Waters, Maxine
Watson Coleman
Welch
Wilson (FL)
Yarmuth

NOES—239

Abraham
Aderholt
Allen
Amash
Amodei
Babin
Barletta
Barr
Barton
Benishek
Bilirakis
Bishop (MI)
Bishop (UT)
Black
Blackburn
Blum
Bost
Boustany
Brady (TX)
Brat
Bridenstine
Brooks (AL)
Brooks (IN)
Buchanan
Buck
Bucshon
Burgess
Byrne
Calvert
Carter (GA)
Carter (TX)
Chabot
Clawson (FL)
Coffman
Cole
Collins (GA)
Collins (NY)
Comstock
Conaway
Cook
Costello (PA)
Cramer
Crenshaw
Culberson
Curbelo (FL)
Davis, Rodney
Denham
Dent
DeSantis
DesJarlais
Diaz-Balart
Dold
Duffy
Duncan (SC)
Duncan (TN)
Ellmers (NC)
Emmer (MN)
Farenthold
Fincher
Fitzpatrick
Fleischmann
Fleming
Flores
Forbes
Fortenberry
Foxx
Franks (AZ)
Frelinghuysen
Garrett
Gibbs
Gibson
Gohmert
Goodlatte
Gosar
Gowdy
Granger
Graves (GA)
Graves (LA)
Graves (MO)
Griffith
Grothman
Guinta
Guthrie
Hanna
Hardy
Harper
Harris
Hartzler
Heck (NV)
Hensarling
Herrera Beutler
Hice, Jody B.
Hill
Holding
Hudson
Huelskamp
Huizenga (MI)
Hultgren
Hunter
Hurd (TX)
Hurt (VA)
Issa
Jenkins (KS)
Jenkins (WV)
Johnson (OH)
Johnson, Sam
Jolly
Jones
Jordan
Joyce
Katko
Kelly (PA)
King (IA)
King (NY)
Kinzinger (IL)
Kline
Knight
Labrador
LaMalfa
Lamborn
Lance
Latta
LoBiondo
Long
Loudermilk
Love
Lucas
Luetkemeyer
Lummis
MacArthur
Marchant
Marino
Massie
McCarthy
McCaul
McClintock
McHenry
McKinley
McMorris Rodgers
McSally
Meadows
Meehan
Messer
Mica
Miller (FL)
Miller (MI)
Moolenaar
Mooney (WV)
Mullin
Mulvaney
Murphy (PA)
Neugebauer
Newhouse
Nugent
Nunes
Olson
Palazzo
Palmer
Paulsen
Pearce
Perry
Pittenger
Pitts
Poe (TX)
Poliquin
Pompeo
Posey
Price, Tom
Ratcliffe
Reed
Reichert
Renacci
Ribble
Rice (SC)
Rigell
Roby
Roe (TN)
Rogers (AL)
Rogers (KY)
Rohrabacher
Rokita
Rooney (FL)
Ros-Lehtinen
Roskam
Ross
Rothfus
Rouzer
Royce
Russell
Ryan (WI)
Salmon
Sanford
Scalise
Schweikert
Scott, Austin
Sensenbrenner
Sessions
Shimkus
Shuster
Simpson
Smith (MO)
Smith (NE)
Smith (NJ)
Smith (TX)
Stefanik
Stewart
Stivers
Stutzman
Thompson (PA)
Thornberry
Tiberi
Tipton
Trott
Turner
Upton
Valadao
Wagner
Walberg
Walden
Walker
Walorski
Walters, Mimi
Weber (TX)
Webster (FL)
Wenstrup
Westerman
Westmoreland
Whitfield
Williams
Wilson (SC)
Wittman
Womack
Yoder
Yoho
Young (AK)
Young (IA)
Young (IN)
Zeldin
Zinke

NOT VOTING—14

Ashford
Becerra
Bera
Capps
Chaffetz
Crawford
Donovan
Noem
Roybal-Allard
Rush
Sherman
Tsongas
Wasserman Schultz
Woodall

□ 1848

So the amendment was rejected.

The result of the vote was announced as above recorded.

Stated for:

Mr. SHERMAN. Mr. Chair, on rollcall No. 257, had I been present, I would have voted "yes."

The Acting CHAIR. The question is on the amendment in the nature of a substitute, as amended.

The amendment was agreed to.

The Acting CHAIR. Under the rule, the Committee rises.

Accordingly, the Committee rose; and the Speaker pro tempore (Mr. FLEISCHMANN) having assumed the chair, Mr. POE of Texas, 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. 1806) to provide for technological innovation through the prioritization of Federal investment in basic research, fundamental scientific discovery, and development to improve the competitiveness of the United States, and for other purposes, and, pursuant to House Resolution 271, he reported the bill back to the House with an amendment adopted in the Committee of the Whole.

The SPEAKER pro tempore. Under the rule, the previous question is ordered.

Is a separate vote demanded on any amendment to the amendment reported from the Committee of the Whole?

If not, the question is on the amendment in the nature of a substitute, as amended.

The amendment was agreed to.

The SPEAKER pro tempore. The question is on the engrossment and third reading of the bill.

The bill was ordered to be engrossed and read a third time, and was read the third time.

The SPEAKER pro tempore. The question is on the passage of the bill.

The question was taken; and the Speaker pro tempore announced that the ayes appeared to have it.

RECORDED VOTE

Ms. EDDIE BERNICE JOHNSON of Texas. Mr. Speaker, I demand a recorded vote.

A recorded vote was ordered.

The SPEAKER pro tempore. Pursuant to clause 8 of rule XX, and the order of the House of today, this 5-minute vote on passage of the bill will be followed by 5-minute votes on the motion to recommit on H.R. 880, and passage of H.R. 880, if ordered.

The vote was taken by electronic device, and there were—ayes 217, noes 205, not voting 10, as follows:

[Roll No. 258]

AYES—217

Abraham
Aderholt
Allen
Amodei
Babin
Barletta
Barr
Barton
Benishek
Bilirakis
Bishop (MI)
Bishop (UT)
Black
Blackburn
Bost
Boustany
Brady (TX)
Brat
Bridenstine
Brooks (AL)
Brooks (IN)
Buchanan
Bucshon
Burgess
Byrne
Calvert
Carter (GA)
Carter (TX)
Chabot
Clawson (FL)
Coffman
Cole
Collins (GA)
Collins (NY)
Comstock
Conaway
Cook
Costello (PA)
Cramer
Crenshaw
Culberson
Denham
DeSantis
DesJarlais
Diaz-Balart
Duffy
Duncan (SC)
Duncan (TN)
Ellmers (NC)
Emmer (MN)
Farenthold
Fincher
Fitzpatrick
Fleischmann
Fleming
Flores
Forbes
Foxx
Franks (AZ)
Frelinghuysen
Garrett
Gibbs
Gohmert
Goodlatte
Gosar
Gowdy
Granger
Graves (GA)
Graves (LA)
Graves (MO)
Griffith
Grothman
Guinta
Guthrie
Hardy
Harper
Harris
Hartzler
Heck (NV)
Hensarling
Herrera Beutler
Hice, Jody B.
Hill
Holding
Hudson
Hultgren
Hunter
Hurd (TX)
Hurt (VA)
Issa
Jenkins (WV)
Johnson (OH)
Johnson, Sam
Jolly
Jordan
Katko
Kelly (PA)
King (IA)
Kinzinger (IL)
Kline
Knight
Labrador
LaMalfa
Lamborn
Lance
Latta
Long
Loudermilk
Love
Lucas
Luetkemeyer
Lummis
MacArthur
Marchant
Marino
Massie
McCarthy
McCaul
McHenry
McKinley
McMorris Rodgers
Meadows
Messer
Mica
Miller (FL)
Miller (MI)
Moolenaar
Mooney (WV)
Mullin
Mulvaney
Murphy (PA)
Neugebauer
Newhouse
Nugent
Nunes
Olson
Palazzo
Palmer
Paulsen
Pearce
Perry
Pittenger
Pitts
Poe (TX)
Poliquin
Pompeo
Posey
Price, Tom
Ratcliffe
Reed
Reichert
Renacci
Ribble
Rice (SC)
Rigell
Roby
Roe (TN)
Rogers (AL)
Rogers (KY)
Rohrabacher
Rokita
Rooney (FL)
Ros-Lehtinen
Roskam
Ross
Rothfus
Rouzer
Royce
Russell
Ryan (WI)
Salmon
Sanford
Scalise
Schweikert
Scott, Austin
Sessions
Shimkus
Shuster
Simpson
Smith (MO)
Smith (NE)
Smith (NJ)
Smith (TX)
Stefanik
Stewart
Stivers
Stutzman
Thornberry
Tiberi
Tipton
Trott
Turner
Upton
Valadao
Wagner
Walberg
Walden
Walker
Walorski
Walters, Mimi
Weber (TX)
Webster (FL)
Wenstrup
Westerman
Westmoreland
Whitfield
Williams
Wilson (SC)
Wittman
Womack
Woodall
Yoder
Yoho
Young (AK)
Young (IA)
Young (IN)
Zinke

NOES—205

Adams
Aguilar
Amash
Ashford
Bass
Beatty
Beyer
Bishop (GA)
Blum
Blumenauer
Bonamici
Boyle, Brendan F.
Brady (PA)
Brown (FL)
Brownley (CA)
Buck
Bustos
Butterfield
Capuano
Cárdenas
Carney
Carson (IN)
Cartwright
Castor (FL)
Castro (TX)
Chu, Judy
Cicilline
Clark (MA)
Clarke (NY)
Clay
Clyburn
Cohen
Connolly
Conyers
Cooper
Costa
Courtney
Crowley
Cuellar
Cummings
Curbelo (FL)
Davis (CA)
Davis, Danny
Davis, Rodney
DeFazio
DeGette
Delaney
DeLauro
DelBene
Dent
DeSaulnier
Deutch
Dingell
Doggett
Dold
Doyle, Michael F.
Duckworth
Edwards
Ellison
Engel
Eshoo
Esty
Farr
Fattah
Fortenberry
Foster
Frankel (FL)
Fudge
Gabbard
Gallego
Garamendi
Gibson
Graham
Grayson
Green, Al
Green, Gene
Grijalva
Gutiérrez
Hahn
Hanna
Hastings
Heck (WA)
Higgins
Himes
Hinojosa
Honda
Hoyer
Huelskamp
Huffman
Huizenga (MI)
Israel

Jackson Lee
Jeffries
Jenkins (KS)
Johnson (GA)
Johnson, E. B.
Jones
Joyce
Kaptur
Keating
Kelly (IL)
Kennedy
Kildee
Kilmer
Kind
King (NY)
Kirkpatrick
Kuster
Langevin
Larsen (WA)
Larson (CT)
Lawrence
Lee
Levin
Lewis
Lieu, Ted
Lipinski
LoBiondo
Loebsack
Lofgren
Lowenthal
Lowey
Lujan Grisham (NM)
Luján, Ben Ray (NM)
Lynch
Maloney, Carolyn
Maloney, Sean
Matsui
McClintock
McCollum
McDermott
McGovern
McNerney
McSally
Meehan
Meeks
Meng
Moore
Moulton
Murphy (FL)
Nadler
Napolitano
Neal
Nolan
Norcross
O'Rourke
Pallone
Pascrell
Payne
Pelosi
Perlmutter
Peters
Peterson
Pingree
Pocan
Polis
Price (NC)
Quigley
Rangel
Rice (NY)
Richmond
Roybal-Allard
Ruiz
Ruppersberger
Rush
Ryan (OH)
Sánchez, Linda T.
Sanchez, Loretta
Sarbanes
Schakowsky
Schiff
Schrader
Scott (VA)
Scott, David
Sensenbrenner
Serrano
Sewell (AL)
Sherman
Sinema
Sires
Slaughter
Smith (WA)
Speier
Swalwell (CA)
Takai
Takano
Thompson (CA)
Thompson (MS)
Thompson (PA)
Titus
Tonko
Torres
Van Hollen
Vargas
Veasey
Vela
Velázquez
Visclosky
Walz
Waters, Maxine
Watson Coleman
Welch
Wilson (FL)
Yarmuth
Zeldin

NOT VOTING—10

Becerra
Bera
Capps
Chaffetz
Cleaver
Crawford
Donovan
Noem
Tsongas
Wasserman Schultz

□ 1858

So the bill was passed.

The result of the vote was announced as above recorded.

A motion to reconsider was laid on the table.

MOMENT OF SILENCE IN HONOR OF THE MARINES WHO LOST THEIR LIVES ON MAY 12, 2015, IN NEPAL

(Mr. MICA asked and was given permission to address the House for 1 minute.)

Mr. MICA. Mr. Speaker, I rise tonight to pay tribute to six United States Marines who lost their lives on May 12, 2015. They died not in combat but in a mission of mercy, aiding the people of Nepal, who, as we have read, have been devastated by a horrific and deadly earthquake.

I would like to at this time yield to their Members of Congress to recognize each of the Marines who sacrificed their lives.

First, I yield to the gentleman from Kansas (Mr. POMPEO).

Mr. POMPEO. Captain Christopher Lee Norgren, Wichita, Kansas, Kansas' Fourth Congressional District.

Mr. MICA. I yield to the gentleman from Nebraska (Mr. SMITH).

Mr. SMITH of Nebraska. Captain Dustin Ryan Lukasiewicz, Alma, Nebraska, Nebraska's Third Congressional District.

Mr. MICA. I yield to the gentleman from California (Mr. CALVERT).

Mr. CALVERT. Sergeant Eric Matthew Seaman, United States Marine Corps, Wildomar, California, California's 42nd Congressional District.

Mr. MICA. I yield to the gentleman from Illinois (Mr. FOSTER).

Mr. FOSTER. Corporal Sara Abigail Medina, Aurora, Illinois, Illinois' 11th Congressional District.

Mr. MICA. I yield to the gentleman from Arizona (Mr. FRANKS).

Mr. FRANKS of Arizona. Lance Corporal Jacob Andrew Hug, Phoenix, Arizona, Arizona's Eighth Congressional District.

Mr. MICA. Mr. Speaker, I will now read the name of the brave Marine from my district:

Sergeant Ward Mark Johnson IV, Altamonte Springs, Florida, Florida's Seventh Congressional District.

Mr. Speaker, greater love hath no man than this, that a man lay down his life for his fellow man.

We, the Members who represent those brave Marines, ask you to join us in a moment of silence. And we also ask, as we approach this Memorial Day, that we remember in our thoughts and in our prayers all those brave Americans and their families who have paid the ultimate price in service to our Nation.

AMERICAN RESEARCH AND COMPETITIVENESS ACT OF 2015

The SPEAKER pro tempore. Without objection, 5-minute voting will continue.

There was no objection.

The SPEAKER pro tempore. The unfinished business is the vote on the motion to recommit on the bill (H.R. 880) to amend the Internal Revenue Code of 1986 to simplify and make permanent the research credit, offered by the gentleman from Massachusetts (Mr. NEAL), on which the yeas and nays were ordered.

The Clerk will redesignate the motion.

The Clerk redesignated the motion

The SPEAKER pro tempore. The question is on the motion to recommit.

This is a 5-minute vote.

The vote was taken by electronic device, and there were—yeas 181, nays 240, not voting 11, as follows:

[Roll No. 259]

YEAS—181

Aguilar
Ashford
Bass
Beatty
Beyer
Bishop (GA)
Blumenauer
Bonamici
Boyle, Brendan F.
Brady (PA)
Brown (FL)
Brownley (CA)
Bustos
Butterfield
Capuano
Cárdenas
Carney
Carson (IN)
Cartwright
Castor (FL)
Castro (TX)
Chu, Judy
Cicilline
Clark (MA)
Clarke (NY)
Clay
Clyburn
Cohen
Connolly
Conyers
Cooper
Costa
Courtney
Crowley
Cuellar
Cummings
Davis (CA)
Davis, Danny
DeFazio
DeGette
Delaney
DeLauro
DelBene
DeSaulnier
Deutch
Dingell
Doggett
Doyle, Michael F.
Duckworth
Edwards
Ellison
Engel
Eshoo
Esty
Farr
Fattah
Foster
Frankel (FL)
Fudge
Gabbard
Gallego
Garamendi
Graham
Grayson
Green, Al
Green, Gene
Grijalva
Gutiérrez
Hahn
Hastings
Heck (WA)
Higgins
Himes
Hinojosa
Honda
Hoyer
Huffman
Israel
Jackson Lee
Jeffries
Johnson (GA)
Johnson, E. B.
Kaptur
Keating
Kelly (IL)
Kennedy
Kildee
Kilmer
Kind
Kirkpatrick
Kuster
Langevin
Larsen (WA)
Larson (CT)
Lawrence
Lee
Levin
Lewis
Lieu, Ted
Lipinski
Loebsack
Lofgren
Lowenthal
Lowey
Lujan Grisham (NM)
Luján, Ben Ray (NM)
Lynch
Maloney, Carolyn
Maloney, Sean
Matsui
McCollum
McDermott
McGovern
McNerney
Meeks
Meng
Moore
Moulton
Murphy (FL)
Nadler
Napolitano
Neal
Nolan
Norcross
O'Rourke
Pallone
Pascrell
Payne
Pelosi
Perlmutter
Peters
Peterson
Pingree
Pocan
Polis
Price (NC)
Quigley
Rangel
Rice (NY)
Richmond
Roybal-Allard
Ruiz
Ruppersberger
Rush
Ryan (OH)
Sánchez, Linda T.
Sanchez, Loretta
Sarbanes
Schakowsky
Schiff
Schrader
Scott (VA)
Scott, David
Serrano
Sewell (AL)
Sherman
Sinema
Sires
Slaughter
Smith (WA)
Speier
Swalwell (CA)
Takai
Takano
Thompson (CA)
Thompson (MS)
Titus
Tonko
Torres
Van Hollen
Vargas
Veasey
Vela
Velázquez
Visclosky
Walz
Waters, Maxine
Watson Coleman
Welch
Wilson (FL)
Yarmuth

NAYS—240

Abraham
Aderholt
Allen
Amash
Amodei
Babin
Barletta
Barr
Barton
Benishek
Bilirakis
Bishop (MI)
Bishop (UT)
Black
Blackburn
Blum
Bost
Boustany
Brady (TX)
Brat
Bridenstine
Brooks (AL)
Brooks (IN)
Buchanan
Buck
Bucshon
Burgess
Byrne
Calvert
Carter (GA)
Carter (TX)
Chabot
Clawson (FL)
Coffman
Cole
Collins (GA)
Collins (NY)
Comstock
Conaway
Cook
Costello (PA)
Cramer
Crenshaw
Culberson
Curbelo (FL)
Davis, Rodney
Denham
Dent
DeSantis
DesJarlais
Diaz-Balart
Dold
Duffy
Duncan (SC)
Duncan (TN)
Ellmers (NC)
Emmer (MN)
Farenthold
Fincher
Fitzpatrick
Fleischmann
Fleming
Flores
Forbes
Fortenberry
Foxx
Franks (AZ)
Frelinghuysen
Garrett
Gibbs
Gibson
Gohmert
Goodlatte
Gosar
Gowdy
Granger
Graves (GA)
Graves (LA)
Graves (MO)
Griffith
Grothman
Guinta
Guthrie
Hanna
Hardy
Harper
Harris
Hartzler
Heck (NV)
Hensarling
Herrera Beutler
Hice, Jody B.
Hill
Holding
Hudson
Huelskamp
Huizenga (MI)
Hultgren
Hunter
Hurd (TX)
Hurt (VA)
Issa
Jenkins (KS)
Jenkins (WV)
Johnson (OH)
Johnson, Sam
Jolly
Jones
Jordan
Joyce
Katko
Kelly (PA)
King (IA)
King (NY)
Kinzinger (IL)
Kline
Knight
Labrador
LaMalfa
Lamborn
Lance
Latta
LoBiondo
Long
Loudermilk
Love
Lucas
Luetkemeyer
Lummis
MacArthur
Marchant
Marino
Massie
McCarthy
McCaul
McClintock
McHenry
McKinley
McMorris Rodgers
McSally
Meadows
Meehan
Messer
Mica
Miller (FL)
Miller (MI)
Moolenaar
Mooney (WV)
Mullin
Mulvaney
Murphy (PA)
Neugebauer
Newhouse
Nugent
Nunes
Olson
Palazzo
Palmer
Paulsen
Pearce
Perry
Pittenger
Pitts
Poe (TX)
Poliquin
Pompeo
Posey
Price, Tom
Ratcliffe
Reed
Reichert
Renacci
Ribble