

General Background on S. 761 The America COMPETES Act

The goal of S. 761 is “to invest in innovation and education to improve the competitiveness of the U.S. in the global economy.”

There is no Congressional Budget Office (CBO) score for the bill. The Office of Management and Budget (OMB) estimates that the bill would cost more than **\$61 billion** over the next four years and would create 20 new programs. A staff analysis finds \$40.3 billion in new spending authorized plus additional authorizations of “such sums as may be necessary.”

Authorization Funding Levels in S. 761, Fiscal Years 2008- 2011

Year	Amount
2008	\$8,499,611,000.00*
2009	\$8,787,972,000.00*
2010	\$10,003,469,000.00*
2011	\$13,043,006,000.00*
Total, 2008- 2011	\$40,334,058,000.00*

*Not including numerous “such sums as necessary”

The White House Statement of Administration Policy states that “the Administration has serious concerns with S. 761 in its current form. The Administration believes that the bill does not prioritize basic research, authorizes excessive and inappropriate spending, and creates unnecessary bureaucracy and education programs. ... Also the Administration is concerned that the bill expands many existing science, technology, engineering, and mathematics (STEM) education programs that have not been proven effective and creates new STEM education programs that overlap with existing Federal programs.”

The bill is divided into four sections: Commerce and Science; Department of Energy; Education (in general, not the Department, per say); and the National Science Foundation.

Directs the President to: (1) convene a National Science and Technology Summit; (2) establish a President's Council on Innovation and Competitiveness; and (3) establish the Innovation Acceleration Research Program.

Directs the Administrator of the National Aeronautics and Space Administration (NASA) to: (1) establish an Aeronautics Institute for Research; (2) coordinate basic and fundamental research activities related to physical sciences, technology, engineering, and mathematics; and (3) establish a Basic Research Executive Council.

Authorizes appropriations for the National Institute of Standards and Technology (NIST) for the Hollings Manufacturing Extension Partnership Program. Requires the NIST Director to: (1) establish the Standards and Technology Acceleration Research Program; and (2) reestablish the Experimental Program to Stimulate Competitive Technology.

Requires the Administrator of the National Oceanic and Atmospheric Administration (NOAA) to: (1) establish a program of ocean and atmospheric research and development; and (2) develop an ocean, coastal, and atmospheric science education plan.

PACE-Energy Act - Directs the Secretary of Energy to: (1) appoint a Department of Energy (DOE) Director of Mathematics, Science, and Engineering Education, and establish a Mathematics, Science, and Engineering Education Fund; (2) award grants for establishing specialty schools for mathematics and science; (3) establish a national laboratories summer internship program for middle and secondary school students; (4) establish Centers of Excellence in Mathematics and Science at schools in regions of national laboratories; (5) establish or expand programs to strengthen mathematics and science teaching skills of public school teachers; (6) establish a program to expand and enhance higher education nuclear science educational capabilities; (7) award grants to outstanding DOE early-career researchers; and (8) establish a program to support the appointment of distinguished scientists by institutions of higher education and national laboratories.

Authorizes the Secretary of Education to award grants to: (1) develop and implement programs to provide courses of study in mathematics, science, engineering, or critical foreign languages with concurrent teacher certification or to enhance teacher knowledge and teaching skills; (2) increase the number of teachers and students teaching or enrolled in advanced placement or international baccalaureate courses in mathematics, science, or critical foreign languages; (3) help low-income students performing below grade level in mathematics; (4) establish programs of study in critical foreign languages; (5) promote content knowledge requirements for secondary school graduation and establish or improve a statewide P-16 education data system.

Requires the Director of the National Science Foundation (NSF) to: (1) expand the Graduate Research Fellowship Program and the Integrative Graduate Education and Research Traineeship Program; (2) establish a clearinghouse and pilot programs relating to the creation or improvement of professional science master's degree programs; (4) establish a program to provide mentors for women interested in careers in science, technology, engineering, and mathematics; and (5) establish a program of basic research in advanced information and communications technologies.

GENERAL PONTs

Everyone agrees that America needs to remain competitive.

Everyone agrees that America can do more to encourage our students to pursue studies and careers in the fields of math and science.

But is the way to achieve these goals to add to our \$8.5 trillion national debt by borrowing tens of billions of dollars for a massive government expansion that creates duplicative programs and relies on bureaucracy to incite innovation and competitiveness?

Everyone also agrees that in order for America to remain competitive in the global economy, we need to ensure that our country is economically strong. But the reality is our nation can not remain competitive or grow economically when the federal government continues to borrow more and more and consume the capital essential for the creation of new enterprise.

That is the likely consequence of this well intentioned, but short sighted bill. The bill attempts to make America more competitive, but if this bill becomes law, America will only be competing for more debt, that will bankrupt important retirement programs and be passed on to the next generation to be paid back in higher taxes and a lower standard of living.

According to the Office of Management and Budget, the America COMPETES Act would cost more than \$60 billion over just four years.¹

The Senate bill creates at least **20 new programs** across many agencies that, if enacted, would divert resources from and undermine and delay the priority basic research.²

¹ Statement of Administration Policy on S. 761, the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education and Science Act (or America COMPETES Act).

² Ibid.

The federal government already loses roughly \$200 billion a year in waste, fraud, abuse, and duplication.

Before Congress creates new programs, it is imperative that the programs that now exist be held accountable to ensure taxpayers' dollars are not wasted.

But Washington politicians more interested in their next election than in the next generation are focused more on passing legislation that creates new programs for which they can take credit than doing the hard work necessary to fix existing programs.

If this bill becomes law, it will further squeeze the programs that are already unfunded federal mandates.

If this bill passes, this will be one more authorized bill competing for limited federal dollars.

How can we reasonably meet the expectations of funding the 20 new programs authorized by this Act plus meet the needs of No Child Left Behind, IDEA, college tuition grants and loans, and the other existing education initiatives and programs that compete for funding every year?

Currently, IDEA is funded at \$15 billion less than authorized. While the federal government is expected to contribute 40 percent of the overall funding for IDEA, currently the federal share is less than 18 percent.

So while Washington is not meeting the authorized federal "obligations" to pay for federal mandates, Congress is going to disregard those previous promises and pass another bill with massive expansion in federal programs and spending that is likely to consume billions of dollars that will be siphoned away from other programs.

This bill will be just one more bill competing for valuable federal dollars. And for every dollar that is funded in this bill – that is one dollar that is not going to meet the federal mandates that Congress has placed on every school district across the country.

The American education system, which this bill is intended to help, is in need of a drastic overhaul. An overhaul that **REDUCES** federal involvement in education not **INCREASES** it. One that allows state and local leaders to **LEAD** in the areas of education – not **FOLLOW** the whims of career politicians and bureaucrats at the Department of Education.

The hands of state and local educational leaders have been tied by this shortsighted “Washington knows best” attitude. Consider that the federal government imposed over 80 percent of educational mandates and pay for less than 7 percent of the costs.

When I talk to superintendents and teachers in my state of Oklahoma, I usually ask them a simple question and I nearly always get the same response.

I asked them, “Would you rather have full funding of No Child Left Behind and the other burdensome federal educational requirements, or would you rather have less funding and make your own determinations on what to teach, how to teach and how to deal with special education students? “

The answer is almost always the same – they would overwhelmingly prefer to be freed from Washington mandates and red tape.

The intentions behind this bill are good, but miss the bigger picture and may actually contribute to the problems that are compromising America’s competitiveness.

The reality is the best way for America to become more competitive is less government spending and regulations.

America can’t compete if America is drowning in debt caused by excessive government spending. A report released just six months ago on the state of U.S. competitiveness entitled “The Competitiveness Index: Where America Stands” issued by the Council on Competitiveness identified the federal budget deficits as one of the factors that could compromise U.S. competitiveness and destabilize the global economy.

America can not compete when labor laws force companies to outsource to stay viable.

American can not compete when tort laws favor greedy trial lawyers and permit frivolous lawsuits.

America can not compete when workers' medical costs are out of control because no free market exists in our health care system.

Fixing these problems does not require 20 new government programs or borrowing tens of billions of dollars, but rather fewer programs and regulations and less government spending and mandates.

According to the Bush Administration - The Administration believes that the bill does not prioritize basic research, authorizes excessive and inappropriate spending, and creates unnecessary bureaucracy and education programs. In addition to the excessive authorization levels, lack of focus on basic research, and unnecessary new bureaucracy, created by S. 761, the specific provisions of serious concern include the following:³

Advanced Research Projects Agency–Energy (ARPA-E). The Administration supports the conceptual goal of ARPA-E “to overcome the long-term and high-risk technological barriers in the development of energy technologies.” However, the Administration continues to strongly object to this provision due to serious doubts about the applicability of the national defense model to the energy sector and because a new bureaucracy at the DOE would drain resources from priority basic research efforts. The Administration believes that the goal of developing novel advanced energy technologies should be addressed by giving the Secretary of Energy the flexibility to empower and reward programs within existing DOE offices to fund unique, cross-cutting, and high-risk research.

³ Statement of Administration Policy on S. 761, the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education and Science Act (or America COMPETES Act).

Innovation Acceleration Research. The Administration strongly objects to requiring each Federal science agency to set aside 8 percent of its research and development budget – a new program of over \$10 billion of the Federal R&D budget at dozens of agencies – for projects that are “too novel or span too diverse a range of disciplines to fare well in the traditional peer review process.” Such a large earmark of the agencies’ ongoing research efforts would certainly have negative, unintended consequences and could well impede the ability of these agencies to carry out their missions.

Equitable Distribution of New Funds. The Administration strongly objects to a requirement specifying particular funding increases for Education and Human Resources (EHR) activities at NSF. This is especially inappropriate while the Administration is responding to the findings and recommendations of the Academic Competitiveness Council to ensure that funding is targeted toward programs with plans to demonstrate effectiveness.

Experimental Program to Stimulate Competitive Technology. The Administration believes that additional resources provided to NIST should focus on existing internal innovation-enabling research activities and strongly objects to creating new programs that would drain resources from such activities.

Specialty Schools for Mathematics and Science. The Administration strongly objects to creating a responsibility for DOE to establish or expand K-12 schools.

Discovery Science and Engineering Innovation Institutes. The Administration strongly objects to using DOE funds to support State and local economic development activities. In addition to diverting funds from priority research areas, such a focus on commercialization is not a priority of the Federal government and could result in putting the government in the position of competing with private investment and influencing market decisions in potentially inefficient and ineffective ways.

Experiential-Based Learning Opportunities. The Administration objects to creating new K-12 education programs unless the need is

clear and compelling, which is not the case for this program. As illustrated by the Academic Competitiveness Council's findings, the solution to improving the Federal government's impact on STEM education must come from identifying what works and improving the effectiveness of existing efforts before starting new programs.

Federal Information and Communications Technology Research.

The Administration objects to the creation of a new program specifically aimed at "enhancing or facilitating the availability and affordability of advanced communications services." Such an industry- and sector-directed program is well beyond NSF's traditional role of advancing the frontiers of knowledge in the academic disciplines.

National Laboratories Centers of Excellence. The Administration objects to the use of DOE funds to establish Centers of Excellence at K-12 schools. The establishment of school-based centers is not a proper role for DOE and would divert national laboratory resources that currently benefit their surrounding communities. The Administration believes that the President's Adjunct Teacher Corps proposal is a more promising approach to bringing subject experts into our neediest schools.

Experimental Program to Stimulate Competitive Research

(EPSCoR). The purpose of the EPSCoR program is to build research capacity; it is not an education program. If EPSCoR funds are diverted for the purpose of hiring faculty or providing supplemental K-12 courses to pre-college students, there will be less money available for increasing the research capacity in EPSCoR States.

Robert Noyce Teacher Scholarship Program. NSF's Robert Noyce scholarship program is too new to have been evaluated for its impact on improving the efficacy or retention of teachers who are program graduates. Therefore, it is unreasonable to increase the authorizations of appropriations at the pace and magnitude called for in this provision.

NASA Funding for Basic Science and Research and Aeronautics Research Institute. The Administration objects to the redirection of

unobligated balances from existing NASA programs, because it would disrupt funding for ongoing activities. The establishment of an Aeronautics Institute for Research within NASA is objectionable because it would be duplicative of the agency's existing Aeronautics Research Mission Directorate.

Constitutional Concerns. Several provisions of the bill incorporate classifications and preferences based on race, national origin, or gender that are subject to the rigorous standards applicable to such provisions under the equal protection component of the Due Process Clause of the Fifth Amendment. (See sections 1405(d), 2003(a) and (d), 4005(b), and 4009.) Unless the legislative record adequately demonstrates that those standards are satisfied, those provisions are objectionable on constitutional grounds.

Some Expensive Highlights

- Doubling funding for the **National Science Foundation (NSF)** from approximately \$5.6 billion in Fiscal Year 2006 to \$11.2 billion in Fiscal Year 2011.
- Nearly doubles the **Department of Energy's Office of Science** over ten years, increasing from \$3.6 billion in Fiscal Year 2006 to over \$5.2 billion in Fiscal Year 2011.
- Creating the Innovation Acceleration Research Program to direct federal agencies funding research in science and technology to **set as a goal dedicating approximately 8 percent of their Research and Development (R&D) budgets toward high-risk frontier research.**

We simply can't afford this. Our next generation can not afford this.

BACKGROUND ON THE NATIONAL SCIENCE FOUNDATION⁴

What is it?

- The National Science Foundation (NSF) is an independent federal agency created by Congress in 1950 "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense..."
- With an annual budget of about \$5.91 billion, we are the funding source for approximately 20 percent of all federally supported basic research conducted by America's colleges and universities. In many fields such as mathematics, computer science and the social sciences, NSF is the major source of federal backing.

How they do this?

- We fulfill our mission chiefly by issuing limited-term grants -- currently about 10,000 new awards per year, with an average duration of three years -- to fund specific research proposals that have been judged the most promising by a "rigorous and objective merit-review system." Most of these awards go to individuals or small groups of investigators. Others provide funding for research centers, instruments and facilities that allow scientists, engineers and students to work at the outermost frontiers of knowledge.
- In the past few decades, NSF-funded researchers have won more than [170 Nobel Prizes](#). These pioneers have included the scientists or teams that discovered many of the fundamental particles of matter, analyzed the cosmic microwaves left over from the earliest epoch of the universe, developed carbon-14 dating of ancient artifacts, decoded the genetics of viruses, and created an entirely new state of matter called a Bose-Einstein condensate.
- NSF also funds equipment that is needed by scientists and engineers but is often too expensive for any one group or researcher to afford. Examples of such major research equipment

⁴ <http://www.nsf.gov/>

include giant optical and radio telescopes, Antarctic research sites, high-end computer facilities and ultra-high-speed connections, ships for ocean research, sensitive detectors of very subtle physical phenomena and gravitational wave observatories.

- Another essential element in NSF's mission is support for science and engineering education, from pre-K through graduate school and beyond. The research we fund is thoroughly integrated with education to help ensure that there will always be plenty of skilled people available to work in new and emerging scientific, engineering and technological fields, and plenty of capable teachers to educate the next generation.