REPUBLICAN CAUCUS

COMMITTEE ON SCIENCE & TECHNOLOGY

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H.R. 5116, the America COMPETES Reauthorization Act of 2010

Republicans continue to support strengthening investments in basic research and science, technology, engineering, and mathematics (STEM) education. However, the 2010 COMPETES reauthorization significantly expands the activities originally authorized in 2007, adding several new programs and activities, well beyond the scope and intent of the original COMPETES bill.

Committee GOP Concerns

- **Spending** – This $86 billion bill calls for dramatic spending increases; $22 billion above the FY2010 baseline, and nearly $8 billion above the original House-passed 10-year doubling path for the core agencies; shortened to a 7-year path, as enacted.
- **Timeline** - While the 2007 COMPETES bill was a 3-year authorization bill, this bill authorizes programs for 5 years. The extended authorization period not only adds to the overall cost of the bill, but it also reduces Congressional flexibility with programs, some of which are newly established in this bill.
- **New Programs and Policy Shifts** - The bill creates numerous new programs that, in some cases, duplicate and dilute funding available for existing programs and priorities, and signal a policy shift away from basic research. New programs include: DOE Energy Innovation Hubs; an NSF Pilot Program on Prizes; a Department of Commerce (DOC) Loan Guarantee Program; DOC "Regional Innovation Clusters"; a NIST "Innovative Services Initiative"; and a NIST Bioscience Research Program. Republicans have raised concerns that these programs, along with changes to existing programs, signal a shift in focus toward:
    - **Commercialization** – Republicans have expressed concern that technology commercialization activities have the potential to divert money away from basic research and could lead to inappropriate market intervention, resulting in the government picking "winners and losers" and crowding out competing private capital.
    - **Climate change and the environment** - Throughout the bill (but particularly within the DOE title), the legislation places greater emphasis on climate change research and reduction of greenhouse gas emissions as a policy objective.

During the full committee markup of the legislation, Republicans offered 39 amendments. While some amendments were accepted, those addressing the fundamental concerns of reducing the authorization levels, eliminating new programs, and "righting" policy shifts in the bill were rejected.

Background

Congress passed the 2007 America COMPETES Act largely in response to recommendations of the National Academies' report, *Rising Above the Gathering Storm*, which maintained that greater investments in basic research and STEM education are critical to America's long-term economic competitiveness. The conference report was a 3-year, $43.3 billion bill specifically targeted to place NSF, DOE's Office of Science, and DOC's National Institute of Standards and Technology (NIST) on a 7-year "doubling path." Additionally, the bill established the Advanced Research Projects Agency - Energy (ARPA-E) within DOE and authorized numerous STEM education programs at NSF and DOE. While many Republicans supported these efforts in 2007, the new bill goes well beyond what was called for by the National Academies. ***Please see back of page for details.***

CBO Cost Estimate

CBO estimates the overall authorization level for H.R. 5116 to be **$86 billion**.

H.R. 5116 Title-by-Title

Title I - SCIENCE AND TECHNOLOGY POLICY

- Includes National Nanotechnology Reauthorization and the National Information Technology Research and Development Reauthorization measures already passed by the House.
- Directs the Office of Science and Technology Policy to establish a long-term, interagency vision for the preservation of Federal scientific collections, manufacturing R&D, and public access to federally funded research. It also instructs OSTP to play a larger role in striving to end perceived gender bias in science and engineering academia.

Title II - NATIONAL SCIENCE FOUNDATION

- Authorizes funding for NSF, primarily strengthening existing programs within NSF, with an emphasis on undergraduate and graduate education.
- Establishes a **new** Innovation Cash Prize pilot program
- The NSF title authorizes over $44 billion, including an increase of over $9.6 billion, or 28 percent, above the current baseline.

Title III - STEM EDUCATION

- Establishes an interagency committee to coordinate Federal STEM education programs
- Creates a PCAST Advisory Committee on STEM education
- Expands DOE STEM education programs ($176 million authorized)
- Includes GOP Green Energy Education Act previous passed by the House (411-6) that authorizes the Secretary of Energy to contribute funds to NSF programs for activities related to the design and construction of high performance buildings.

Title IV - NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

- Authorizes funding for NIST, elevates the Director to an Under Secretary of Standards and Technology at the Department of commerce, reorganizes the operational units at NIST, establishes a **new** Innovative Services Initiative grant and a biosciences research program, including **new** university research centers and a user facility.
- The NIST title authorizes $5.4 billion, including an increase of $1.1 billion, or 26 percent, above the current baseline.

Title V – INNOVATION

- Creates a **new** loan guarantee program for small- and medium-size manufacturers to "re-equip, expand, or establish manufacturing facilities." Program authorized at $50 million per year over five years.
- Creates a **new** DOC Program on "Regional Innovation Clusters" to "facilitate market development of products and services." Program is authorized at "such sums" levels.
- Codifies DOC's new "Office of Innovation and Entrepreneurship," which is to be responsible for "developing policies to accelerate innovation."

Title VI - DEPARTMENT OF ENERGY

- Authorizes the DOE Office of Science; ARPA-E; and the **new** DOE Energy Innovation Hubs at a combined level of over $40 billion, representing an increase of almost $10 billion, or 40 percent, above the current baseline.
    - Energy Innovation Hubs—a **new** priority program of Energy Secretary Chu—are intended to bring government, academic, and industry experts together to support all stages of energy R&D.

Title VII – MISCELLANEOUS PROVISIONS

- Includes a competitiveness priority for spending under this Act
- Provides special consideration to institutions of higher education that serve persons with disabilities, including veterans
- Gives a scholarship and fellowship preference to veterans and service members.