



MEMORANDUM

February 18, 2009

TO: Nancy Hensel
Council on Undergraduate Research

FROM: Della Cronin
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Washington Partners, LLC

RE: American Recovery and Reinvestment Act Update

On Tuesday, February 17, President Obama signed the \$787.2 billion *American Recovery and Reinvestment Act of 2009* (H.R. 1) into law. The final Conference Report passed in the House Friday afternoon by a vote of 246 to 183, with no Republican support. Late Friday night, the Senate cleared the same package by a vote of 60 to 38, with the support of only three Senate Republicans: Senators Susan Collins (R-ME), Olympia Snowe (R-ME), and Arlen Specter (R-PA). Stretching late into the evening, the vote was held open so that Senator Sherrod Brown (D-OH) could return from Ohio to cast his vote.

The final stimulus package places a significant emphasis on education, science and research. Below, please find a comparison of provisions that are of particular interest to CUR. The text in italics details provisions of the final bill. The comparison is based on House and Senate Conference Report language, as well as the Joint Explanatory Statement for the final Conference Agreement. In coming weeks and month federal agencies will work to distribute these funds for their intended use, and in an effort to increase the transparency of this effort, the Administration has set up a website that will keep track of this process at www.recovery.gov.

SCIENTIFIC RESEARCH

National Science Foundation

Initially, the House version of the stimulus included \$3 billion for the National Science Foundation (NSF), which included: \$2 billion for expanding employment opportunities in fundamental science and engineering to meet environmental challenges and to improve global economic competitiveness; \$400 million to build major research facilities that perform cutting edge science; \$300 million for major research equipment shared by institutions of higher education and other scientists; \$200 million to repair and modernize science and engineering research facilities at the nation's institutions of higher education

and other science labs; and \$100 million to improve instruction in science, math and engineering through a \$60 million investment in the Robert Noyce Teacher Scholarship program and a \$40 million investment in the NSF's Math Science Partnership.

The final Senate version of the stimulus included a total of \$1.2 billion for the NSF, which included: \$1 billion to help America compete globally; \$150 million for scientific infrastructure; and \$50 million for competitive grants to improve the quality of science, technology, engineering, and mathematics (STEM) education.

The final Conference Agreement settled on \$2.5 billion for NSF research and related activities. Of that money, \$300 million will be available for the major research instrumentation program, and \$200 million will be available for academic facilities modernization. The Conference Agreement also includes \$100 million for the NSF Education and Human Resources Directorate, which includes: \$60 million for the Robert Noyce Scholarship Program; \$25 million for Math and Science Partnerships; and \$15 million for the Professional Science Master's Programs. Additionally, \$400 million will be provided for major research equipment and facilities construction, and \$2 million for the Office of Inspector General.

National Institutes of Health

The House version of this bill included \$2 billion for biomedical research within the National Institutes of Health (NIH). Of those funds, \$1.5 billion was reserved for expanding good jobs in biomedical research to study diseases such as Alzheimer's, Parkinson's, cancer, and heart disease. An additional \$1.5 billion was reserved for renovation of university research facilities.

The Senate version included \$10 billion to conduct biomedical research in areas such as cancer, Alzheimer's, heart disease and stem cells, and to improve NIH facilities.

The Conference Agreement settled on \$10 billion for NIH, which includes expanding good jobs in biomedical research to study diseases such as Alzheimer's, Parkinson's, cancer, and heart disease. From these funds, \$1 billion is reserved for competitive awards for construction and renovation of extramural research facilities, and \$500 million will be used for the construction and renovation of NIH buildings and facilities.

Department of Energy

The House version of the bill included \$2 billion for Office of Energy which is the single largest supporter of basic research into the physical sciences, including higher-energy physics, nuclear physics, and fusion energy sciences. Within this amount, \$400 million is included for the Advanced Research Project Agency–Energy to support high-risk, high-payoff research to accelerate the innovation cycle for both traditional and alternative energy sources and energy efficiency.

The Senate version included a total of \$39 billion for the Department of Energy, reserving \$330 million for laboratory and infrastructure construction for the Office of Science.

In the final Conference Agreement, \$1.6 billion is reserved for the Office of Science for research in such areas as climate science, biofuels, high-energy physics, nuclear physics, and fusion energy sciences. In addition to this \$1.6 billion, \$400 million will be provided for Advanced Research Project Agency–Energy.

NASA

A total of \$600 million was included in the House bill for the National Aeronautics and Space Administration (NASA). From these funds, \$400 million was reserved for climate change research, including Earth science research recommended by the National Academies; \$150 million for research, development, and demonstrations to improve aviation safety and Next Generation air traffic control (NextGen); and \$50 million to repair NASA centers damaged by hurricanes and floods last year.

The Senate bill included a total of \$1.3 billion for NASA, including: \$450 million for Earth science missions to provide critical data about the Earth's resources and climate; \$200 million to enable research and testing of environmentally responsible aircraft and for verification and validation methods for complex aerospace systems and software; \$450 million to reduce the gap in time that the U.S. does not have a vehicle to access the International Space Station; and \$200 million for repair, upgrade and construction at NASA facilities.

In total, the final Conference Agreement includes \$1 billion for NASA, which includes: \$400 million for Earth science missions to provide critical data about the Earth's resources and climate; \$150 million for system-level research, development, and demonstrations to improve aviation safety and the Next Generation Air Transportation System (NextGen); \$400 million will be reserved for exploration; \$50 million will be reserved for cross-agency support; and \$2 million is for the Office of Inspector General. NASA is also directed to submit a spending plan to the House and Senate Appropriations Committees within 60 days of the enactment of this Act. This spending plan will detail NASA's intended allocation of funds.

NIST

For the National Institute of Standards and Technology (NIST), the House stimulus included a total of \$500 million. From these funds, \$300 million was reserved for competitive construction grants for research science buildings at colleges, universities, and other research organizations. An additional \$100 million was reserved for NIST Scientific and Technical Research and Services (STRS) program, in order to coordinate research efforts of laboratories and national research facilities by setting interoperability standards for manufacturing. Finally, \$100 million was also reserved for the NIST Industrial Technology Services, of which \$70 million would go towards the Technology Innovation Program (TIP). TIP was a competitive grants program established in the

COMPETES Act designed to speed the development of high-risk, transformative research targeted to address key societal challenges.

The Senate version provided a total \$475 million for NIST, including: \$307 million for renovation of NIST facilities and new laboratories using green technologies, and \$168 million for scientific and technical research at NIST to strengthen the agency's IT infrastructure.

The final Conference Agreement provides \$580 million for NIST, including: \$220,000,000 for research, competitive grants, additional research fellowships and advanced research and measurement equipment and supplies, as well as \$360 million to address NIST's backlog of maintenance and renovation and for construction of new facilities and laboratories. Of the amounts provided, \$180 million will be for the competitive construction grant program for research science buildings.

NOAA

The House version of the stimulus included \$600 million for the National Oceanic and Atmospheric Administration, to address critical requirements in satellite acquisition and development and provide necessary resources to address unmet national climate change research and mitigation activities, including the acquisition of climate sensors on soon-to-be deployed satellites. These funds were also intended to establish climate data records for continuing research into the cause, effects, and ways to mitigate climate change. Additionally, \$400 million was included to support habitat and fisheries restoration, as well as marine debris and mitigation projects.

The Senate included \$645 million to construct and repair NOAA facilities, equipment and vessels to reduce the Nation's coastal charting backlog. These funds were also intended to upgrade supercomputer infrastructure for climate research, and restore critical habitat around the Nation.

The final Conference Agreement includes \$230 million for NOAA operations, research, and facilities to address a backlog of research, restoration, navigation, conservation, and management activities. The Agreement also includes \$600 million for construction and repair of NOAA facilities, ships and equipment, to improve weather forecasting and to support satellite development. Of the amounts provided, \$170 million will address critical gaps in climate modeling and establish climate data records for continuing research into the cause, effects and ways to mitigate climate change.

National Endowment for the Arts

The House version of the stimulus included \$50 million for the National Endowment for the Arts (NEA). This funding would be allocated by the NEA to help the retention of jobs for nonprofit organizations and to provide grants to fund arts projects and activities. Of this grant funding 40 percent will be distributed as formula grants to State arts agencies and regional arts organizations, and 60 percent will be set aside for competitive grants for selected arts projects and activities.

The Senate version of the bill provided no such funding for the NEA.

The final Conference Agreement includes \$50 million for the NEA, as proposed by the House.

Centers for Disease Control and Prevention

The House bill included \$462 million to enable Centers for Disease Control and Prevention (CDC) to complete its Buildings and Facilities Master Plan and to begin other CDC facility renovations and construction, predominantly for the National Institute for Occupational Safety and Health.

The Senate bill provided \$412 million for the CDC facility construction and renovations.

The final Conference Agreement included no funding for CDC building construction or renovation.

U.S. Geological Survey

The House version of the stimulus included \$200 million for the United States Geological Survey (USGS), in order to repair and modernize science facilities and equipment, including improvements to laboratories, earthquake monitoring systems, and computing capacity.

The Senate version included \$135 million to repair and modernize USGS science facilities and equipment, including improvements to laboratories, earthquake monitoring systems, and computing capacity.

The final Conference Agreement provides \$140 million to repair and modernize USGS science facilities and equipment, including improvements to laboratories, earthquake monitoring systems, and computing capacity.

Pandemic Influenza

The House bill provided \$900 million to prepare for a pandemic influenza, support advanced development of medical countermeasures for chemical, biological, radiological, and nuclear threats, and for cyber security protections at the United States Department of Health and Human Services.

The Senate bill and the final Conference Agreement did not include funding for pandemic influenza preparedness and biomedical advanced research and development.

HIGHER EDUCATION

Pell Grants

The House version of the stimulus included \$15.6 billion to increase the maximum Pell Grant by \$500, from \$4,850 to \$5,350.

The Senate bill included \$13.9 billion to increase the Pell Grant maximum award and pay for increases in program costs resulting from increased eligibility and higher Pell Grant awards. The bill supports an increased Pell Grant maximum award of \$281 in the 2009-2010 academic year and \$400 in the 2010-2011 academic year. This aid will help 7 million students pursue postsecondary education.

The final Conference agreement provides \$15.6 billion to increase the maximum Pell Grant to \$5,350.

Student Financial Assistance

In addition to Pell Grant increases, the House version of the stimulus provided \$490 million to support undergraduate and graduate student work-study programs. This version also increased unsubsidized Stafford loan limits by \$2,000, and provided \$50 million to help the Department of Education administer surging student aid programs while navigating the changing student loan environment.

While the Senate version of the stimulus provided no such provisions regarding these programs, it did include \$61 million for Perkins loans capital contributions.

The final Conference Agreement includes \$200 million for undergraduate and graduate work-study programs, and \$60 million to help the Department of Education with surging student aid programs. The final Conference Agreement does not include a provision for Pell Grant increases or for Perkins loans.