

VIEWS AND ESTIMATES
COMMITTEE ON SCIENCE AND TECHNOLOGY
FISCAL YEAR 2011

President Obama transmitted his budget request for Fiscal Year 2011 to Congress on February 1, 2010. The Committee on Science and Technology is pleased that the budget request includes significant investments in civilian research and development and is generally consistent with the funding priorities laid out in the *America COMPETES Act*. The Committee strongly shares the President's interest in putting the country on a fiscally sustainable path and recognizes the need to make tough choices to restore fiscal discipline. At the same time, the Committee agrees with the Administration that investments in science and innovation play a crucial role in ensuring our nation's long-term economic security and meeting the challenges of the future.

The following are the views of the Committee on Science and Technology on the budget for programs within the Committee's jurisdiction.

National Science Foundation

The National Science Foundation (NSF) is the primary source of Federal funding for non-biomedical basic research conducted at colleges and universities. The budget request includes \$7.424 billion for NSF in Fiscal Year 2011, an 8.0 percent increase over Fiscal Year 2010 enacted funding. This level of funding keeps the budget of NSF on a doubling path, consistent with the funding goals laid out in the *America COMPETES Act*. The Committee is pleased with the proposed increases to the Research and Related Activities budget at NSF, and supports efforts to increase funding for programs focused specifically on innovation.

The Committee notes that, since its creation in 1950, NSF has been tasked with strengthening science, technology, engineering, and mathematics (STEM) education at all levels. NSF's education programs are unique in their peer review processes and their resulting capacity to develop new and improved educational materials and assessments, create better teacher training techniques, and move promising ideas to practice. The Committee supports funding NSF at a level that will ensure adequate and sustained support for its STEM education programs, particularly for the Noyce Teacher Scholarship Program and the Math and Science Partnerships Program, and is concerned that the budget request may not be sufficient to meet this goal.

The Committee will be moving legislation this year to reauthorize the National Science Foundation as part of the reauthorization of the *America COMPETES Act*.

Department of Energy

The Committee supports the budget request for the wide range of basic and applied research activities at the Department of Energy, including for the activities of the Office of Science, the Advanced Research Projects Agency – Energy, the Office of Energy Efficiency and Renewable Energy, and the Office of Nuclear Energy.

The Office of Science funds basic research and world-class facilities that play an integral role in maintaining technological competitiveness. Recognizing the important link between the Office of Science and long-term economic prosperity in the United States, the *America COMPETES Act* authorized significant funding increases for the Office. As such, the Committee welcomes the Fiscal Year 2011 budget request of \$5.1 billion for the Office of Science. This funding level represents a 4.4 percent increase over Fiscal Year 2010 enacted levels.

As envisioned by the National Academies' 2005 report, *Rising Above the Gathering Storm*, and authorized by the *America COMPETES Act*, the Advanced Research Projects Agency – Energy (ARPA-E) is responsible for funding high-risk, high-payoff, game-changing research and development projects to meet the nation's long-term energy challenges. The mission of ARPA-E is to overcome technological barriers in the development of energy technologies by sponsoring research and technology development that industry is unlikely to undertake alone. The Committee strongly supports robust funding levels for ARPA-E. The *America COMPETES Act* authorized funding of \$300 million for ARPA-E in its first year of operation with a significant ramp up in funding over the next few years. The Fiscal Year 2009 appropriations bill and the *American Recovery and Reinvestment Act* provided ARPA-E with \$415 million in funding for its first two years. The budget request for ARPA-E in Fiscal Year 2011 is \$300 million. While the Committee appreciates the budget request, it urges a funding level more consistent with the funding trajectory envisioned in the *America COMPETES Act*.

The President's budget request includes \$2.35 billion for the Office of Energy Efficiency and Renewable Energy (EERE), representing a 5.0% percent increase from the Fiscal Year 2010 enacted level. The Committee is pleased that the budget request includes significant increases in funding for select large-scale demonstrations, vehicle technology research, and the development of innovative new building technologies for increased energy efficiency, but is disappointed to see level and decreased budget requests for specific renewable programs.

The President is requesting \$503 million for research and development at the Office of Nuclear Energy, an 8.0% percent increase over the Fiscal Year 2010 enacted level. Close to 80 percent of this request is dedicated to the Fuel Cycle R & D and Reactor Concepts RD & D programs. The Committee believes that the United States must have

an inclusive portfolio to meet its growing need for energy and reduce greenhouse gas emissions, and recognizes nuclear power as a legitimate component of that portfolio. For this reason, the Committee supports research and development efforts to meet the technological challenges posed by expanded nuclear power production.

The Committee intends to move legislation this year to reauthorize the activities of the Office of Science and ARPA-E. The Committee also intends to draft and move legislation to authorize a comprehensive nuclear research and development program at the Department of Energy.

National Institute of Standards and Technology

The Committee is pleased that the Fiscal Year 2011 budget request provides funding increases for the National Institute of Standards and Technology (NIST) to advance technological innovation and economic competitiveness. The budget request for NIST for Fiscal Year 2011 is \$918.9 million, a 7.3 percent increase over the Fiscal Year 2010 enacted level. This funding level is consistent with the doubling path set out in the *America COMPETES Act*.

The Committee strongly supports the \$10 million increase proposed for the Technology Innovation Program (TIP). TIP awards cost-shared grants to small companies and joint ventures for the development of high-risk, high-reward technologies that meet critical national needs. The Committee recognizes TIP as an important tool in increasing technological innovation in this country, and supports efforts to provide the program with the funding it needs to complete its mission.

The Committee also strongly supports the \$5 million increase proposed for the Manufacturing Extension Partnership. The MEP program is a public-private partnership in all 50 states and Puerto Rico that provides technical assistance for small manufacturers to modernize their operations and adapt to foreign competition. The increase in the Fiscal Year 2011 budget request would be used for innovation services for small and medium-sized manufacturers to accelerate technology adoption, promote environmentally sustainable practices, support market diversification, and improve workforce capabilities.

Finally, the Committee is supportive of the request for \$69.4 million for Scientific and Technical Research and Services for focused investments in areas of national priority. In the face of increased global competitiveness, the Committee supports NIST's efforts to work with industry to address green manufacturing and construction, cybersecurity, the metrology to support the growth and potential of biopharmaceuticals, advanced solar technologies, and disaster resilient buildings and infrastructure.

The Committee will move legislation this year to reauthorize the National Institute of Standards and Technology as part of the *America COMPETES Act* reauthorization.

National Aeronautics and Space Administration

The budget request for Fiscal Year 2011 includes \$19 billion for the National Aeronautics and Space Administration (NASA), an increase of 1.5 percent over the enacted Fiscal Year 2010 level. The Committee is pleased that the budget request provides increased support for NASA's Earth Science Decadal Survey missions, aeronautics R & D on "green aviation", extending the operation and utilization of the International Space Station to at least 2020, and exploration-related technology development activities. At the same time, the decision to cancel funding for the Constellation Program and to increase investment in the development of commercial crew human spaceflight vehicles represents a significant shift in policy that requires careful and deliberate consideration by the Committee on Science and Technology. The congressional budget justification from NASA, providing detailed information about the proposed changes, was only made available to the Committee on February 22, 2010 and is currently under review.

The Committee intends to move a multi-year reauthorization of the National Aeronautics and Space Administration this year.

National Oceanic and Atmospheric Administration

The Committee is pleased that the budget request for Fiscal Year 2011 includes a 17 percent increase in funding for the National Oceanic and Atmospheric Administration (NOAA). The bulk of the proposed increase in funding at NOAA is for the National Environmental Satellite Data Information Systems Office and, more specifically, for the Joint Polar Satellite Systems (formerly the National Polar-orbiting Operational Environmental Satellite System). The Committee recognizes that the data provided by the Joint Polar Satellite Systems is critical for several key U.S. economic sectors, as well as national defense needs, and requires appropriate investment. At the same time, the Committee strongly supports adequate funding for the Office of Oceanic and Atmospheric Research and the National Weather Service, and is concerned that chronic underfunding may erode some of NOAA's mission-critical services.

Environmental Protection Agency

The Committee has long advocated increased funding for research and development at the Environmental Protection Agency (EPA) to ensure that regulations are scientifically sound and cost effective. The Committee appreciates that the budget request includes a slight increase in funding for research and development at EPA, despite a proposed reduction in overall EPA funding. The budget request for Fiscal Year 2011 includes \$847 million for Science and Technology programs and a \$24.5 million transfer from the Superfund account to support Superfund-related research.

Department of Transportation

The Committee supports robust funding for research and development at the

Department of Transportation, consistent with the commitment outlined in SAFETEA-LU. The Committee is pleased that the Research and Innovative Technology Administration at the Department of Transportation has received a funding increase in the Fiscal Year 2011 budget request (from \$13 million to \$17 million) and welcomes proposed increases for Research, Development, and Technology programs at the Federal Highway Administration (from \$643.6 million to \$652.8 million) and Research and Development at the Federal Transit Administration (from \$14.8 million to \$33.1 million). The Committee hopes to move legislation this year to reauthorize surface transportation research and development programs at the Department of Transportation.

The President's budget request provides \$190 million for research, engineering, and development at the Federal Aviation Administration, a decrease of \$500 million below Fiscal Year 2010 enacted levels. The Committee supports the efforts of the FAA to conduct research, engineering, and development to improve the national airspace system's capacity and safety, and urges a budget for these programs sufficient to carry out these responsibilities. In particular, the Committee supports the significant increase in funding, including a sizable increase in the research, engineering, and development budget, for the Next Generation Air Traffic Control System (Next Gen). The budget request includes \$1.143 billion in funding (up from \$868 million in Fiscal Year 2010 enacted) for all Next Gen programs at FAA, including \$77.5 million in research, engineering, and development-related funding (up from \$72 million in FY 2010).

Department of Homeland Security

The budget request includes \$1.018 billion for the Department of Homeland Security's Science and Technology Directorate, representing a 1.2% increase from the Fiscal Year 2010 enacted level. This increase is the result of the movement of the Department's Domestic Nuclear Detection Office research program to the Science and Technology Directorate. Without the DNDO research programs, the budget request represents a 9.7% reduction in funding from Fiscal Year 2010 levels for the Science and Technology Directorate. The Committee strongly supports the work of the Science and Technology Directorate, and wants to ensure that it has the resources it needs to carry out the research and development required to keep our nation safe.

The Committee intends to move legislation this year to reauthorize the activities of the Department's Science and Technology Directorate.

Sec. 425 OVERSIGHT OF GOVERNMENT PERFORMANCE

Section 425 of S. Con Res 13, the Fiscal Year 2010 Budget Resolution requires committees to review programs within their jurisdiction and make recommendations to reduce wasteful Federal spending to promote deficit reduction and long-term fiscal responsibility.

House Rule X assigns the Science and Technology Committee special oversight responsibility for "reviewing and studying, on a continuing basis, all laws, programs, and Government activities dealing with or involving non-military research and development." The Committee appreciates this special oversight jurisdiction and makes the identification of waste, fraud, and abuse in all non-military research and development programs a top priority.

To support its important oversight work, in the 110th Congress, the Science and Technology Committee reestablished the Subcommittee on Investigations and Oversight to help identify instances of waste, fraud, and abuse that could create savings for the Federal taxpayer. The Subcommittee continues to oversee a wide-ranging and detailed oversight operation, conducting investigations into instances of wasteful spending and holding oversight hearings to ensure that taxpayer dollars are spent as effectively and efficiently as possible. The Committee's legislative subcommittees are also regularly involved in overseeing spending at their agencies, aggressively pursuing any allegations of waste, fraud, or abuse.

In 2009, the Committee collectively authored many oversight letters and held at least 16 oversight hearings. The Committee also worked closely with the Government Accountability Office (GAO) and the Inspectors General of its agencies on allegations of wasteful spending. Currently, the Committee has dozens of accepted requests for work pending with GAO and more are currently under development.

The Committee's oversight into government waste and contractor abuse has resulted in real savings to taxpayers. Most recently, following extensive oversight by the Committee, the Department of Homeland Security announced on February 25, 2010 a decision to cancel the plan to deploy advanced radiation monitors at ports and border crossings around the country. This program had been the subject of 3 hearings and multiple letters from the Committee focusing on the excessive costs and inefficiencies of the proposed technology. Cancellation of the program will save taxpayers at least \$1.5 billion in acquisition costs.

The Committee is committed to building on this record in Fiscal Year 2011. The Committee will continue work already underway in the areas of: computer system

acquisitions, contractor costs and performance in the acquisition of next generation weather and climate satellites, procurement, conflict of interest and program management at the National Aeronautics and Space Administration, conflict of interest issues at the Department of Energy, and efforts to consolidate aviation weather services. In addition, the Committee will continue its aggressive oversight of funding appropriated in the *American Recovery and Reinvestment Act*, to ensure that funding is spent as intended.

A more detailed description of the Committee's planned oversight activities can be found in the Committee Oversight Plan for the 111th Congress:
<http://democrats.science.house.gov/Media/File/111th%20Oversight%20Plan.pdf>.

Bart Jordan

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Brig Bin

Kathy DeHaven

Daniel Lipinski

~~John J. Remondé~~

Steven A. Rothman

Henry V. Costello

Jim Matheson

Linch Jans

B. A. L. (Lujan)

Chet Wilk

Paul Stankus

Ann Carnahan

Alan Grayson

Eddie Dennis Johnson

Marcia L. Fudge

Ben Chandler

Eugene Peto

Paul Smith

Donna F. Edwards

Lynn Woolsey

List of Signatures

1. Rep. Bart Gordon
2. Rep. David Wu
3. Rep. Brian Baird
4. Rep. Kathy Dahlkemper
5. Rep. Daniel Lipinski
6. Rep. John Garamendi
7. Rep. Steven Rothman
8. Rep. Jerry Costello
9. Rep. Jim Matheson
10. Rep. Lincoln Davis
11. Rep. Ben Ray Lujan
12. Rep. Charlie Wilson
13. Rep. Paul Tonko
14. Rep. Russ Carnahan
15. Rep. Alan Grayson
16. Rep. Eddie Bernice Johnson
17. Rep. Marcia Fudge
18. Rep. Ben Chandler
19. Rep. Gary Peters
20. Rep. Brad Miller
21. Rep. Donna Edwards
22. Rep. Lynn Woolsey

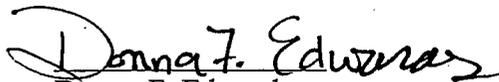
Committee on Science and Technology
Additional Views
by Congresswoman Donna F. Edwards and Congressman Brian Baird
on the Views and Estimates of the Committee Fiscal Year 2011

We signed the Views and Estimates of the Committee on Science and Technology Fiscal Year 2011, however we would like to state our objection to the views by the Committee that investing in new nuclear reactors is a viable strategy to address America's energy independence portfolio. The industry has a history of cost overruns and default and current escalating cost estimates, as well as ongoing issues of safety of nuclear technology and the long-term storage of nuclear waste. Therefore, we have considerable reservations about expending limited U.S. taxpayer dollars on nuclear energy.

Loan guarantees for new reactors are very risky. Moody's Investor Services has called investment in new reactors a "bet the farm" strategy. According to the Congressional Budget Office (CBO), the likelihood of default on loans for new reactors is "very high – well above 50 percent." Renewable energy and efficiency technologies would be far less risky, could be implemented far more quickly and would cost ratepayers two to three times less.

Since any investment in nuclear power is going to be uncertain and costly, we urge the Committee to spend the time and energy that has been dedicated to nuclear energy by instead promoting cheaper and cleaner renewable energy and efficiency technologies. If we don't make a strong investment in renewable energy and efficiency, we will miss our opportunity to have a strong energy portfolio for the 21st Century that is both safe and cost-effective.

Sincerely,



Donna F. Edwards
Member of Congress



Brian Baird
Member of Congress

**CONGRESSMAN GRAYSON
ADDITIONAL VIEWS & ESTIMATES**

National Oceanic and Atmospheric Administration (NOAA)

While I was encouraged to see an overall increase for the National Oceanic and Atmospheric Administration (NOAA) in the President's FY2011 Budget, I believe that additional funding remains necessary to improve our ability to predict hurricanes, hurricane intensity, and promote greater overall focus on mitigating the devastating effects that hurricanes have on coastal populations and infrastructure.

With nearly 50 percent of the total U.S. population living within 50 miles of coastline, it is essential that we identify how vulnerable these ever expanding coastal populations become. I come from a community, and a state, that is no stranger to frequently changing, increasingly intense, and unpredictable weather patterns. Florida, with a population of more than 15 million, and a coastline stretching 1,200 miles, has been the most vulnerable state in the country in regards to hurricane or tropical storm activity, nearly doubling any other state in the total number of hurricanes and major storms on record since 1851.

The devastation and impact of recent hurricanes have demonstrated the critical need for an improved understanding of hurricanes and the ways in which we can better prepare to minimize loss of life and destruction of property. The economic impacts alone caused by hurricanes can cripple entire regions of the United States, as we saw in New Orleans in 2005, where Hurricane Katrina displaced hundreds of thousands from their homes, decimated local industry, and totaled an overall economic impact of nearly \$150 billion dollars in Louisiana and Mississippi.

While billions of U.S. taxpayer dollars are spent on evacuation and relief efforts, the federal government invests little in the science and engineering research that could greatly minimize these enormous costs and save lives. Greater understanding of hurricanes and more accurate hurricane forecasts regarding

landfall and intensity are essential in moving forward. I strongly believe that an increased focus on hurricane modeling, the understanding of storm surges, rainfall, and flooding will increase our success in accurate track predictions and mitigation strategies. With greater attention to these areas, NOAA will need access to cutting edge storm observation technologies, as well as state-of-the-art research and observation facilities. I encourage the Budget Committee to increase funding for NOAA, to ensure that we have the best tools available to move hurricane forecasting technologies and models forward, thereby improving safety and economic integrity of our exposed coastal populations.

A handwritten signature in black ink, reading "Alan Grayson". The signature is written in a cursive style with a long horizontal flourish at the end.

U.S. HOUSE OF REPRESENTATIVES
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Committee on Science and Technology
Fiscal Year 2011 (FY11)
Minority Views and Estimates

It is important that we continue to make appropriate investments in science and technology research, development, and math and science education in order for the United States to remain a world leader in competitiveness and innovation. While Committee Republicans agree with the Majority that the Administration's budget summary "recognizes the benefits that science and technology and research and development investments have for our country's economic competitiveness, energy security, job growth and environmental health," we are also mindful that in the current economic environment, the nation faces numerous and difficult budgetary decisions that will require our careful consideration, diligent oversight, and appropriate action.

We are pleased that the budget summary continues to build on the American Competitiveness Initiative and the America COMPETES Act (COMPETES) (P.L. 110-69) by providing funding for physical sciences and engineering at the National Science Foundation (NSF), the National Institute of Standards and Technology (NIST), and the Office of Science at the Department of Energy (DOE), but have some concerns that in the quest to get stimulus money out the door, the Administration may be accelerating this funding beyond authorized levels with little to no direction on spending. We are skeptical about the claims of the Administration regarding the number of jobs created by the funding that was provided by the American Recovery and Reinvestment Act and remain concerned about the lack of oversight of the funding for these programs.

National Science Foundation (NSF)

The FY11 budget request for NSF is \$7.4 billion. This \$551.9 million increase is 8 percent increase over the FY10 estimate. While Committee Republicans recognize that the budget request falls below the amounts authorized in the America COMPETES Act (COMPETES), we also note that in addition to the \$596 million in stimulus funds obligated for FY10, an additional \$450 million remains unobligated. We support a robust budget request for NSF, but remain concerned that we not exceed current authorization amounts.

With regard to education, we agree with the Majority that NSF has an important and unique role to play in strengthening science, technology, engineering, and mathematics (STEM) education at all levels. We further agree with the Majority that the FY11 budget

should provide sustained support for K-12 programs, including the Noyce Teacher scholarship program and the Math and Science Partnership Program.

The FY 11 budget request continues to make climate change research and education a priority throughout the Foundation. NSF currently funds numerous research and education programs that address climate change across all directorates; however, the FY11 budget request continues to direct funding specifically to climate change. By continuing to single out a specific area of research over myriad others for targeted funding, this budget request hinders NSF's ability to support all science and engineering disciplines, potentially depriving funding for other much needed basic research.

Department of Energy (DOE)

In general Committee Republicans agree with and support the Administration's focus on basic research in this budget, particularly the efforts to place the Office of Science on a doubling path as called for by the America COMPETES Act. However, we note that the \$300 million request for the Advanced Research Projects Agency (ARPA-E), if directed to the Office of Science, would be sufficient to provide for full funding along the doubling path endorsed by the America COMPETES Act and the Obama Administration. A majority of Republicans opposed the creation of ARPA-E in part due to concerns that it would divert funding from the Office of Science and impede the doubling effort. This budget appears to validate these concerns.

Further, those of us in opposition to ARPA-E continue to have concerns regarding the suitability of the DARPA model applied to the energy sector as well as the continued lack of clarity regarding the scope and mission of the agency. Accordingly, we believe that high-risk, high-reward R&D projects be funded through the traditional DOE structure and prioritized against existing applied energy technology programs. More broadly, we also remain concerned by the overall lack of clarity in the budget with respect to the numerous programs with overlapping goals and similar activities. In particular, the budget does not effectively articulate the details of and distinctions between energy technology development programs, such as the ARPA-E, Energy Innovation Hubs, Energy Frontier Research Centers, and traditional applied technology programs. Accordingly there appears to be a high potential for overlap and duplication of effort that must be addressed before funding increases for these programs move forward.

Committee Republicans are also disappointed and concerned with the impact of the proposed budget on American energy independence. While the budget's emphasis on renewable energy and energy efficiency programs will certainly contribute to energy independence, its hostile approach to supply side factors associated with energy independence—primarily, expanding traditional sources of domestic energy—is disturbing. For example, we are deeply disappointed that the President's budget summary proposes to eliminate the Ultra-Deepwater and Unconventional Natural Gas and Other Petroleum Research Program established in Section 999 of the Energy Policy Act of 2005 (P.L. 109-58). Section 999H(a) sets the funding for this program at a level of \$50-million-per-year provided from Federal lease royalties, rents, and bonuses paid by oil and gas companies - not taxpayers. It should be clear that the overall program was

initiated and carried out to reach energy known to exist in the areas targeted - energy that was impossible to produce without new technology - and that the required technology would be eventually be paid for from the energy captured. The funds are to be directed towards research specifically targeting four areas: ultra-deepwater resources, unconventional natural gas and other petroleum resources, technology challenges of small producers, and research complementary to these areas.

Additionally, while we are wholly supportive of research into renewable and alternative forms of energy, we feel that domestically produced oil and natural gas will continue to play an important role in powering our country and must therefore receive support to increase our domestic supply and reduce our foreign dependence. The budget eliminates funding for research and development in fossil energy and appears to focus funding solely on carbon capture and sequestration research and development associated with coal fired electricity generation and industrial sources. We are pleased that research into carbon capture and storage is playing a prominent role in the budget summary, but we encourage the Budget Committee to continue to recognize the importance of oil and natural gas research and development to our country's future. The domestic oil and natural gas industry experienced nine (9) percent job growth from 2002-2008. With the Administration's recent focus on jobs proposals in the budget that stymie job growth should be fully examined.

While we commend the administration's efforts to provide additional loan guarantees for nuclear power plants and support efforts to focus research and development into reprocessing of spent nuclear fuel and the next generation of nuclear plants, we note the President's determination that Yucca Mountain is not a workable option and the subsequent decision to withdraw, with prejudice, the license application for the Yucca Mountain repository program raises significant regulatory and legal issues that may not only adversely affect the licensing and construction of a new fleet of nuclear power plants, but also may impact existing operating nuclear plants and license renewals. We believe that it is premature to withdraw this application, which has already cost the American taxpayers upwards of \$10 billion, prior to consideration of all the options for disposal of nuclear waste by the Blue Ribbon Commission. Nuclear energy should be fully supported as the type of clean energy technology that will reduce dependence on foreign oil and all options should be allowed to be considered with regard to addressing spent fuel.

National Institute of Standards and Technology (NIST)

The Department of Commerce's NIST supports U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology to enhance economic competitiveness and address important societal challenges. The Administration's FY11 budget request for NIST is \$918.9 million, a 7.3 percent increase over the FY10 level. This amount does not reflect the recently announced \$123 million in FY10 stimulus funds for the NIST Construction Grant program (NCGP) to build new university research facilities or the \$180 million in stimulus funds to maintain and renovate current NIST facilities.

NIST's core research and facilities programs are widely recognized as well-managed, high-leverage activities supported by world-class researchers. Accordingly, Committee Republicans agree with the Majority that these activities should receive priority in the budget; and, along with the Manufacturing Extension Partnership (MEP) and the Technology Innovation Program (TIP), be funded in accordance with the levels authorized in COMPETES.

At the same time, Committee Republicans intend to continue close oversight of NIST's budget and activities and hope to work with the Majority and the Administration to ensure appropriate and effective use of taxpayer dollars. Of particular concern is oversight for the new NCGP program, which received Stimulus funds but was not authorized by Congress or formally reviewed and considered by this Committee. Also, Committee Republicans are concerned that even though the Construction of Research Facilities (CRF) request is \$22.2 million below the FY10 levels (not including Stimulus funding), it is still \$124.8 million. Given that NIST received \$180 million in Stimulus funds to address maintenance and renovation at its facilities, we would like a more thorough accounting of how these funds are being used in FY10 and the need for additional funding in FY11.

National Aeronautics and Space Administration (NASA)

NASA is at a critical juncture. The agency is preparing to retire the Space Shuttle at the end of this year without a successor vehicle in place. Our nation faces the prospect of sending hundreds of millions of dollars to Russia over several years to buy seats on their launcher until a replacement vehicle is in place. Given this national challenge, the President's FY2011 budget request of \$19.0 billion for NASA, which represents an increase of \$276 million (1.5%) over FY2010 enacted, is justified. While we are supportive of this increase, we differ significantly on the direction of the agency.

The FY2011 budget request reflects a radical departure for the agency. It cancels NASA's successor to the Space Shuttle, the Constellation program, which would be capable of launching astronauts to the International Space Station as well as to destinations beyond low Earth orbit. Two successive Congresses (109th and 110th) under different party leadership have overwhelmingly supported Constellation in NASA authorization bills. Over the last five years taxpayers have invested \$9.1 billion on Constellation, and NASA engineers are confident that most of its technical challenges have been addressed. To cancel this program now without reaping the benefits of this investment would be a huge waste of taxpayer dollars. It also jeopardizes our nation's ability to return humans to space as quickly and safely as possible, and could have detrimental effects on our national security and global preeminence.

In place of Constellation, the FY2011 budget increases spending for technology research and development activities that someday may provide new propulsion, sensor, and materials capabilities for yet-to-be-determined missions. It also shifts money toward a commercial crew program (\$500 million in FY2011; \$5.8 billion over five years) to seed the development of commercial entities proposing to launch humans into low Earth orbit. Without offering any proof or programmatic details, the budget proposal assumes that

commercial launch providers will be able to offer human spaceflight services that are safer, faster, and cheaper. Committee Republicans have long supported the development of commercial cargo services and have ensured that authorization bills include funding for commercial cargo ventures. But, we also believe that until these entities can demonstrate an ability to safely put cargo into space it is not prudent to gamble American lives.

Committee Republicans are also concerned that the FY2011 budget significantly increases NASA's spending for Earth Sciences, adding \$381 million (27%) over the FY2010 enacted, and \$1.8 billion over four years (FY2011 – FY2014) compared to FY2010. The other science divisions receive modest increases or are flat-funded. Earth Science will eventually consume 40% of the agency's overall science program, crowding out funding for exciting science missions flown by the astrophysics, planetary sciences, and heliophysics communities.

The Committee believes it is imperative for NASA to maintain world leadership in human spaceflight capabilities. We are at the tipping point with the retirement of the Space Shuttle, and many industry experts firmly believe the Constellation program is the safest and most prudent investment. Given that the Science and Technology Committee has deliberated on this issue for several years and advanced bipartisan, broadly-supported legislation, it is disconcerting that this budget proposal suggests such a radical and unsupported direction for the agency.

Department of Commerce – National Oceanic and Atmospheric Administration (NOAA)

Committee Republicans have reservations about the FY11 budget request for NOAA of \$5.6 billion, an \$806 million (17 percent) increase over the FY10 enacted level. This substantial increase reflects several momentous policy decisions that have not been vetted by the Committee on Science and Technology.

The minority notes a significant change in this budget request from previous budget requests with the dissolution of the National Polar-orbiting Operational Environmental Satellite System (NPOESS) tri-agency program with NASA and DOD, and the creation of the Joint Polar Satellite System (JPSS), in which NOAA will be solely responsible for the cost of development and procurement of instruments for polar-orbiting weather satellites. The DOD is currently reviewing its options in moving forward with its own separate weather satellite system. Severing the tri-agency venture is a drastic attempt to ensure the prevention of potential data gaps in weather and climate information in the next few years. Over the last several Congresses, the Committee has held numerous hearings regarding the problems and delays in NOAA's next generation of satellites. However, we have not yet had a chance to evaluate the implications of this decision since it was announced just prior to the release of the President's budget.

Although this separation is still in transition with no clear path forward and no plan how to get there, NOAA has submitted a budget request that would cover the increased expense of building this satellite system independently. Accordingly, the minority

believes that the FY11 request for \$2.2 billion for the National Environmental Satellite Data and Information Service (NESDIS) is premature at this time. This request is \$810.5 million (58 percent) above the FY10 enacted levels as a result of the JPSS program. We believe that this radical shift in policy requires much more oversight and scrutiny by Congress and we strongly urge a more comprehensive policy be developed before moving forward with this plan.

Committee Republicans are extremely hesitant about the request of \$464.9 million for the Office of Ocean and Atmospheric Research (OAR), which is a \$15.7 million (3.5 percent) increase over FY10 enacted levels. Coupled with the \$170 million OAR received in stimulus funding, this increase represents a continued commitment to enhance climate change research. While another increase at this time also begs the question of fiscal responsibility, our chief concern is that NOAA has recently announced its intent to establish a NOAA Climate Service as a new line office. This announcement came after the release of the President's budget, so it was not included in the FY11 request. It is our understanding that NOAA intends to request a reprogramming from the Appropriations Committees which will simultaneously move several key programs into the new line office, including the physical science parts of climate research and modeling from OAR, 3 data centers from NESDIS, and the climate observing network from the National Weather Service (NWS). As a result, OAR will be left with approximately \$200 million and will become nothing more than a collection of random research programs.

The minority does not support NOAA's plan for creating a Climate Service for both policy and process reasons. We are extremely concerned that moving research into an operational program office will leave the research needs vulnerable since operational priorities will take precedence. NOAA has had experience with research suffering in an operational office in the past and the result was the NWS research components were moved to OAR in order to keep the focus of NWS on operations. With this proposal, NOAA is choosing to ignore the lessons of the past.

Furthermore, by moving the essential climate research programs into a new line office, NOAA abandons the interdisciplinary benefits gained by housing physical climate research with research from other scientific branches. The proposed Climate Service will attempt to provide adaptation products, which require the successful integration of biological, physical, environmental and social sciences into products and tools. However, the focus on solely the physical science research as part of the Climate Service indicates a shortsighted approach to meeting future climate product demands. One only needs to look at the National Integrated Drought Information System program (NIDIS) and its success to see the need to integrate many different types of science pulled from many different sources to provide a complete picture of impacts and tools for planning. Finally, OAR would effectively be crippled by the removal of half its research program and funding, thus weakening overall science at NOAA.

Therefore, we do not support the increase request for climate research in OAR until we can be satisfied that any new Climate Service would not irreparably harm research, as this current plan most certainly does, and until NOAA reorganization proceeds through

proper legislative channels, including consideration by the Committee on Science and Technology, which is the appropriate course of action for a reorganization of this magnitude.

Environmental Protection Agency (EPA)

Committee Republicans share the Majority's view that investments in research and development will be beneficial in the form of greater cost-efficiency of environmental protection programs. However, we are concerned that EPA's request includes funding for the promulgation of regulations that Congress does not yet support. The \$847 million FY11 budget request for science and technology is a 0.1 percent increase over the 2010 enacted levels. Despite the heavy focus of the EPA budget on the anticipated implementation of a host of new regulations triggered by the EPA's endangerment finding finalized in December 2009, we are extremely concerned that only \$16.9 million of the Climate Protection Program budget request is for science and technology, a \$2.9 million decrease from FY10 enacted levels. As this is the program under which the Agency intends to promulgate these new regulations, such a request is indicative of EPA's "putting the cart before the horse" mentality in planning to create and implement new regulations that reduce greenhouse gas emissions with very little consideration of the need to develop the technology that would be required to do so.

U.S. Department of Transportation

Federal Aviation Administration – Research, Development and Technology

The FY2011 budget request provides \$400.57 million for FAA research and development activities, a \$11.53 million (3%) reduction below FY2010 enacted. Agency R&D is spread across four accounts:

1. **Office of Commercial Space Transportation (OCST).** The FY2011 budget request provides \$15.75 million for OCST, a \$510 thousand (3%) increase over FY2010 enacted. OCST is responsible for licensing and regulating commercial space launches and reentries to ensure compliance with standards designed to protect public safety. In addition, OCST encourages the commercial space launch industry to maintain pace with latest technological improvements in launch hardware and practices, and it serves to promote the growth of the US industry.
2. The **Research Engineering and Development** account (Aviation Trust Fund), with an FY2011 request of \$190.00 million, compared to \$190.50 million enacted in FY2010. RE&D conducts research to support a safe, efficient and environmentally acceptable aviation system in five key areas: air traffic services, airport technology, aircraft safety, human factors, and the environment.
3. A portion of the **Facilities & Equipment** account (Aviation Trust Fund) dedicated to engineering, development, test and evaluation, with an FY2011 request of \$155.16 million, a 10% reduction compared to FY2010 enacted.
4. A portion of the **Airports Improvement Program** account (Aviation Trust Fund) with an FY2011 request of \$42.22 million, a 13% increase compared to FY2010 enacted.

At a programmatic level we support the FAA's budget request for development and implementation of NextGen, our nation's future air traffic management (ATM) system.

NextGen technologies will ensure that our national airspace system can readily accommodate future growth while maintaining the highest levels of safety. Whether speaking about NextGen R&D, or NextGen generally, it is essential these efforts be supported.

Research and Innovative Technology Administration (RITA)

The FY2011 budget request provides \$17.2 million for RITA, a \$4.2 million (32%) increase over FY2010 enacted. RITA is responsible for coordinating DOT's research and development programs, as well as coordinating and developing Positioning, Navigation and Timing (PNT) technology, PNT policy coordination, and spectrum management. RITA is the program manager for the Nationwide Differential Global Positioning System. Most of the requested increase will support maintenance and equipment capitalization for the PNT services, especially through its Nationwide Differential Global Positioning System.

We also support the proposed funding levels for research and development for the **Federal Highway Administration** (\$652.8 million in FY2011, a 1% increase over FY2010 enacted) and the **Federal Transit Administration** (\$33.1 million in FY2011, a 124% increase over FY2010). Both of these essential activities will help America develop transportation solutions needed to sustain economic growth.

Department of Homeland Security (DHS)

The FY11 budget request for the Department of Homeland Security's Science and Technology Directorate is \$1.02 billion, a 1.2 percent increase from the FY10 level. This increase reflects the movement of the Domestic Nuclear Detection Office's transformative research program to S&T. Without the program transfer, S&T funding would be 9.7 percent below FY10 funding levels. Committee Republicans are in strong agreement with the Majority that the work of the Science and Technology Directorate is important, and we will work to ensure that it has the resources it needs to carry out the research and development required to keep our nation safe.

Recognizing the importance of both Assistance to Firefighter Grants (AFG) and Staffing for Adequate Fire and Emergency Response (SAFER) grants to our Nation's fire departments, Committee Republicans remain concerned that with the consolidation of the Firefighter Assistance Grants Program into the State and Local budget line, the AFG program will continue its declining trend of funding. We strongly encourage the Administration to make sure that both grant programs, AFG and SAFER, remain balanced.

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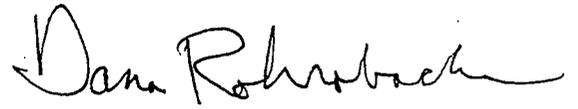
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ADDITIONAL DISSENTING VIEWS
OF HON. DANA ROHRABACHER
COMMITTEE ON SCIENCE AND TECHNOLOGY
FISCAL YEAR 2011

Appropriate investments in research and development are critical to the future of every American, of our economy, and of our position of strength in the world. But we should not, we can not, we must not, mortgage that future by borrowing ever increasing amounts to achieve those goals. Although I agree with much of the Minority Views and Estimates, there are some specific areas on which I wish to state a different view.

U.S. Global Change Research Program The U.S. Global Change Research Program (USGCRP) is the government-wide program created by Congress in 1990 "to improve understanding of uncertainties in climate science, expand global observing systems, develop science-based resources to support policymaking and resource management, and communicate findings broadly among scientific and stakeholder communities." The \$2.6 billion requested in the FY 2011 budget is a 20.7% increase over the FY 2010 enacted funding. These funds are requested directly in the budgets of NASA, NSF, NOAA, NIST, DOE, and other departments.

To be blunt, the entire budget for this program should be zeroed out. Federal global warming research has reduced, rather than improved, understanding of the uncertainties in climate systems. Many of the resources we have are not science-based. To continue down this path is foolish and foolhardy. By choosing not to borrow this \$2.6 billion, the proposed increase to the total federal R&D budget over the FY 2010 enacted budget could be reduced by more than 70%.

National Aeronautics and Space Administration I am pleased the budget request for Fiscal Year 2011 for the National Aeronautics and Space Administration (NASA) calls for increased research and technology development so that America can be more competitive and NASA can explore the solar system more affordably. This is critical, both to create long-term jobs and to enable NASA to continue to explore even as we work to control deficit spending.

I am further pleased by the increase of \$16 million to near-Earth object identification and tracking. I am hopeful that this is a sign the Administration takes this issue seriously, and will meet its obligation under the NASA Authorization Act of 2008 (P.L. 110-422) in "recommending a Federal agency or agencies to be responsible for protecting the United States from a near-Earth object that is expected to collide with Earth; and implementing a deflection campaign, in consultation with international bodies, should one be necessary with the responsibility for mitigation responsibilities."

And finally, I applaud the courage of the Obama Administration in calling for the cancellation of the Constellation program. Constellation, according to our nation's best

experts, is unsustainable and would not have fulfilled the goal of putting America back on the Moon by 2020 or even 2025, and we must be better trustees of America's public funds than continuing to spend funds on a program that cannot succeed. Instead, by choosing to invest in commercial launch options to low Earth orbit, our nation will invest in multiple projects to enable and stimulate both commercial human access to Earth orbit and more affordable NASA exploration beyond Earth orbit. I am strongly in support of these goals; I always have been. I therefore strongly support and endorse the key human spaceflight and technology elements of the President's budget for NASA.

Committee on Science and Technology
Fiscal Year 2011 (FY11)
Additional Views and Estimates

Department of Energy – Advanced Research Projects Agency

ARPA-E supports high-risk, high-payoff research and development designed to move breakthrough energy technologies into the market. It harnesses the considerable capabilities of American scientists, investors, innovators, and engineers to deliver robust, secure, and clean sources of energy.

ARPA-E holds much promise in developing and deploying technologies that will reduce our dependence on foreign oil and improve energy security. But I question whether the proposed higher funding levels will detract from important basic research performed by the Office of Science at the Department of Energy.

Department of Homeland Security

This Committee has continued to offer support for both Assistance to Firefighter Grants and Staffing for Adequate Fire and Emergency Response grants to our Nation's fire departments. Given the country's massive debt, we must ask ourselves "who does what" in order to restrain federal spending. Traditionally, states and local communities have been responsible for fire prevention and response efforts. We should limit this assistance to events that rise to the level of national disaster.



Bob Inglis
Member of Congress

Committee on Science and Technology
U.S. House of Representatives
Additional Views

The Minority Views and Estimates for the Committee on Science and Technology incorporate many positions that I support regarding the future of the various agencies under the Committee's jurisdiction. However, I want to emphasize the need to be vigilant in our oversight of these agencies and their budgets. In these difficult economic times and the record breaking deficits and debt levels, it is vital that the Committee not let the taxpayer down. As the American people are being forced to tighten their belts and make tough financial decisions for their families, this Committee must do the same. I am very concerned that some of the spending in certain agencies, coupled with the massive outlays in last year's American Recovery and Reinvestment Act of 2009 are unsustainable, in many areas unwarranted. With each program, the Committee must ask the tough questions. Is this program necessary? Can we afford this program? Are these programs constitutional? Is this program already being done? How do we measure success or failure of the program?

Additionally, the Administration's budget continues to make climate change a priority. As money is dispersed to this end, I believe we need to make sure that whatever conclusions that may be drawn are in fact based on sound science and that any policy initiatives should not be implemented without Congressional approval and oversight and with this Committee's active participation.



Paul Broun, M.D.
Member of Congress

Committee on Science and Technology
Additional Views - Fiscal Year 2011 (FY11)
Rep. Pete Olson, TX-22, Ranking Member
Subcommittee on Space and Aeronautics

I am deeply concerned about a proposed cut to NASA's human spaceflight program. Although NASA's top line amount has been increased, the proposed cancelling of the Constellation program is unwise, unwarranted, and unnecessary. Without Constellation, we have no concrete plans to develop a manned spaceflight system and our country will instead have to rely on purchasing seats from the Russians for the foreseeable future.

Furthermore, Constellation was designed to take humans beyond low Earth orbit to enable our eventual return to the Moon and to other interesting destinations. Without it, we are putting ourselves at risk of ceding US preeminence in space, especially in light of efforts now underway by other space-faring nations to develop their own manned spaceflight systems.

Contrary to recommendations made by the Augustine Commission to provide additional resources to ensure the agency can develop and sustain a "sound exploration program" – the administration has chosen to not take this path. Surprisingly, the budget proposal took current spaceflight program funding and shifted it toward technology research efforts, but without providing a destination, strategy or goal for their intended use. The lack of resources in itself is troubling and puts NASA in a very difficult position, but the proposed cancellation is devastating, making it very difficult to sustain funding over a long period of time if we do not have a clear goal.

The negative impact on our economy, to our industrial base, and on the ability to inspire students and young people to pursue studies in science and engineering, should make it very clear to anyone that this is the wrong decision to make.

Just as importantly, if our goal is to inspire students to learn about and pursue careers in STEM, we should maintain a commitment to the most visible and exciting program that has motivated more students and young professionals than any other: our nation's human spaceflight program.

This budget sets the priorities for our nation, and there is no doubt that American leadership in the area of human spaceflight should continue to be one of those national priorities.



Rep. Pete Olson