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Congress of the United States
House of Representatives

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February 20, 2015

The Honorable Tom Price, M.D.
Chairman
Committee on the Budget
207 Cannon House Office Building
Washington, DC 20515

Dear Chairman Price,

Pursuant to the provisions of clause 4(f) House Rule X and Section 301(d) of the Congressional Budget Act of 1974, I am transmitting the Views and Estimates, including the Ranking Minority Member's views, of the Committee on Science, Space, and Technology for Fiscal Year 2016.

Sincerely,

Lamar Smith

Lamar Smith
Chairman

Cc: The Honorable Eddie Bernice Johnson, Ranking Member
Committee on Science, Space, and Technology
The Honorable Chris Van Hollen, Ranking Member
Committee on the Budget

Enclosure

THE VIEWS AND ESTIMATES

OF THE

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

U.S. HOUSE OF REPRESENATATIVES

FOR FISCAL YEAR 2016

On February 2, 2015, as part of the Fiscal Year (FY) 2016 Budget of the U.S. Government, the President proposed spending $145.7 billion on Federal Research and Development (R&D). The Science Committee supports a core government focus on basic research and development activities. We also believe that such priority fundamental investments, coupled with tax and regulatory reform and a budget on a path to balance, will lead to greater economic growth, many more new, good jobs for the future, and faster technological innovation, productivity gains, and increased international competitiveness. In that light, following are the Views and Estimates of the Committee on Science, Space, and Technology on the budget for the R&D programs within the Committee's jurisdiction for FY 2016:

National Aeronautics and Space Administration (NASA)

The National Aeronautics and Space Administration is our nation's primary civilian space and aeronautics research and development agency. NASA plans and executes missions that increase our understanding of Earth, the solar system, and the universe. NASA operates the International Space Station (ISS) and is developing the Orion crew vehicle and Space Launch System to launch American astronauts beyond low-Earth orbit. NASA operates and develops a fleet of spacecraft throughout our solar system, space telescopes, Mars rovers, and a number of research aircraft. NASA undertakes activities in technology development and transfer, and education and outreach. The agency also participates in a number of interagency activities such as the Next Generation Air Transportation System with the Federal Aviation Administration, information technology development, and climate change research. The Administration's budget request for NASA in FY 2016 is $18.53 billion, which is an increase of $519 million, or 2.9 percent, above the enacted appropriation for FY 2015. However, five years ago, $19 billion was requested in the President's Budget. The Science Committee recommends significant reallocation of resources within the NASA budget.

This Administration has been clear that space exploration is not high on its list of priorities. This situation is not the fault of NASA, but of the White House. It was the White House's decision to cancel the Constellation program in 2010, which—along with the retirement of the Space Shuttle—was a major blow to our nation's space program after billions were invested in building this program. NASA astronauts are now beholden to Russia for access to space and many people question America's preeminence in space exploration as a result. Further, it was the White House's decision in 2012 to cancel a joint robotic mission to Mars with our European allies, which led to the European Space Agency working with Russia instead of the United States on this endeavor.

These decisions by the White House—which NASA is simply told to execute—send a strong signal to our allies that this Administration lacks dedication when it comes to space exploration and that America is an unreliable partner in space endeavors. The Administration is ceding America's leadership in space exploration. Underfunding the Space Launch System (SLS), cut by 20 percent in the FY 16 budget, and the Orion program, cut by 8 percent, and increasing funding for Earth Sciences by 74 percent since 2007 while the overall NASA budget remains largely flat, marginalizes America's civil space activities.

Human Spaceflight

With the retirement of the Space Shuttle, America currently has no domestic capability to carry our astronauts to space—a strategic national capability. NASA currently pays the Russians over $70 million per seat for each of our astronauts to "hitch a ride." This price has increased over several years, and it is likely to increase in the future. This is a particularly regrettable example of America's leadership in space slipping under this Administration.

For this reason, the Committee remains dedicated to launching American astronauts on American rockets from American soil as soon as is practicably safe to do so. The NASA Authorization Act of 2015, passed by voice vote in the House on February 10, 2015, authorizes $805 million of government funding for NASA's commercial crew program and reiterates that the Orion crew vehicle and Space Launch System shall be developed as a back-up capability. NASA needs to focus this development effort toward meeting the primary goal of launching American astronauts as soon as possible rather than any secondary goals, such as developing a purported commercial market beyond NASA's transportation needs to the International Space Station or using NASA's government funds to carry more than one commercial provider. Now that NASA knows the price from industry partners, price competition is no longer a determining factor under the existing contract structure.

For the fourth budget request in four years, the Administration has set a budget for the Space Launch System and Orion crew vehicle which are inadequate to support the original launch date for these systems. Last year, NASA completed a key decision point that delayed the launch of these systems in favor of funding other less important Administration priorities. For the past several years, Congress has authorized and appropriated more funding for these systems than the Administration requested because the Congress believes in the importance of space exploration in spite of the President's budget request. The Administration has routinely sought to undermine this priority, and does so again with its FY 2016 budget request. The Committee does not support the Administration's request for the Space Launch System and Orion crew vehicle as it is insufficient to accomplish the stated goals and milestones for the program.

The Administration continues to pursue an uninspiring mission to robotically capture an asteroid the size of a large conference table, or perhaps a portion of an asteroid, and tow it back to cislunar space for astronauts to rendezvous with it. This mission concept was dismissed by scientists, engineers, and NASA's own advisory committees. While the Committee supports a robust program to survey and characterize all Near Earth objects (NEO) as directed by Congress, the Committee believes it is time for the Administration to move on from this costly detour and pursue planning for missions better suited to the long-term goal of reaching Mars, perhaps including a flyby of the Red Planet to be launched in 2021, or returning to the lunar surface with international and industry partners.

Space Technology

The Congressional justification for the President's NASA budget request for FY 2016 describes work done within the Space Technology Mission Directorate that clearly overlaps with the other mission directorates (Science, Aeronautics Research, and Human Exploration and Operations). This appears to demonstrate some duplicative purposes for a directorate that has been proposed to receive a 22 percent increase from $596 million to $725 million. It is unclear whether the Space Technology Mission Directorate is designed to support the other mission directorate activities, technology gaps within NASA, or private sector interests. The Committee believes there is a need for NASA to conduct innovative technology research and development, and is cognizant of the fact that long-term research funding is often used to pay for near-term requirements. However, the current program appears to blur the lines between mission directorate requirements and high-risk, high-reward research and development and should be more tightly focused and constrained. Rather than specific cutting-edge research justifying funding within each mission directorate, aggregated long-term research must now compete directly with the other three mission directorates for priority resources.

Science

While other NASA science divisions have been consistently asked to do more with smaller budgets, the Administration continues to request that Earth Science receive a disproportionate amount of funding, while cutting other highly productive discovery areas like Planetary Science. The FY 2016 budget requests $1.95 billion, or 37 percent of the total Science Mission Directorate budget, be devoted to Earth Science and its climate change focus. Its funding level was $1.2 billion at the beginning of this Administration. The budget request for Planetary Science is $76 million less than the amount appropriated by Congress in FY 2015. These divisions need to be significantly reprioritized and rebalanced.

As part of the Administration's Sustainable Land Imaging program, the President's budget request also places development of Landsat 9, the "Thermal-Infrared Free-Flyer" (a spacecraft to use as a potential data gap filler if Landsat 7 fails before Landsat 9 is launched), and climate sensors for use by NOAA satellites in NASA's budget. It does not appear that the cost of this work is fully transferred in the budget, or is being done on a reimbursable basis.

In Planetary Sciences, the budget identifies $30 million for pre-formulation of a Europa mission, a $70 million decrease from FY 2015 funding, but does not treat it as a scientific or budget priority, despite its status in the most recent National Academies' Planetary Science Decadal Survey. The budget request also proposes eliminating funding for the Lunar Reconnaissance Orbiter and the Mars Exploration Rover Opportunity missions, which appears ill-advised based on recent scientific reviews.

The President's budget request increases the Astrophysics budget by $24 million compared to the amount appropriated by Congress in FY 2015. This year's budget request funds SOFIA, an airborne infrared telescope that cost over $1 billion to build and only recently reached operational status. Last year's budget request would have eliminated the SOFIA mission, which Congress rejected.

The Committee supports the James Webb Space Telescope with a targeted launch date of fall 2018. A top priority of the astronomy and astrophysics scientific community, the telescope incurred excessive cost growth in the past, and may face new schedule delays if NASA and its contractors can't address technical challenges. The Committee will continue to closely oversee this program to ensure it remains on schedule and within budget.

Aeronautics

The Administration's FY 2016 budget requests $571 million for the Aeronautics Research Mission Directorate (ARMD), a 12 percent decrease from the $651 million enacted in the FY 2015 appropriations bill. The Administration has reorganized ARMD from six research programs into four programs: three "mission" programs and one program focused on developing high-risk, forward thinking ideas. Though the Administration has identified several major activities under ARMD, the challenge will be to ensure that those initiatives continue to be run efficiently and effectively under the new organization, and that none of the functions of ARMD are lost. The Science Committee supports the development, transfer, and implementation of new technologies as part of the Next Generation air traffic control modernization as well as NASA's planned work integrating unmanned aircraft systems (UAS) into the national airspace, supersonics, rotorcraft, and composite materials.

Education

The FY 2016 budget request for NASA education is $89 million. This is a $30 million cut from the amount appropriated by Congress in FY 2015. Congress has historically funded the space grant program above the President's request. The Science Committee will continue to monitor how that additional funding is spent.

The National Science Foundation

The National Science Foundation (NSF) provides 24 percent of federal support for all basic research at U.S. colleges and universities, almost 2,000 institutions in all, and is second only to the National Institutes of Health in support for all academic research. It is the primary source of federal funding for non-medical basic research, providing approximately 40 percent of all federal support, and serves as a catalyst for science, technology, engineering, and mathematics (STEM) education improvement at all levels. Ninety-four percent of NSF funding goes directly toward basic research initiatives that ultimately serve as the foundation for progress in nationally significant areas such as national security (especially cybersecurity), technology-driven economic growth, energy independence, health care, nanotechnology, and networking and information technology. Only one in five grant applications is currently awarded. The Science Committee is currently drafting legislation to reauthorize NSF for FY 2016 and FY 2017. The last comprehensive NSF reauthorization expired in FY 2013.

Last year, the House Science, Space, and Technology Committee approved H.R. 4186, the Frontiers in Innovation, Research, Science and Technology (FIRST) Act, to reauthorize NSF for FY 2014 and FY 2015. The FIRST Act would have authorized $7.28 billion for the NSF in FY 2015, which represented a 1.5% increase from FY 2014 appropriations and was slightly higher than the President's budget request. $7.34 billion was ultimately appropriated in FY 15 and the FY 16 NSF budget request is $7.72 billion, a 5.2 percent increase. The Committee recognizes the importance of making appropriate investments in science and technology basic research and STEM education in order that America remain a world leader in scientific and technical innovation that spurs our economy.

The Committee remains concerned, however, that the Administration is diverting scarce NSF basic research funds to priorities that are better left to other federal agencies with more expertise and likely are duplicative of other efforts. For example, NSF proposes to spend $377 million for clean energy research and $81 million for the Science, Engineering, and Education for Sustainability (SEES) program. NSF's proposed contribution to the interagency US Global Change Research Program—with $2.7 billion requested in various agencies—is $341 million in FY 2016, a more than 50% increase since 2008. Further, the NSF budget request for Social, Behavioral, and Economic Sciences (SBE) is more than $291 million in FY 2016, which represents an increase of 13.5% and 7.1%, respectively, over the FY 2014 and FY 2015 amounts. This increase is disproportionately larger than other research fields with a high return on investment, including the Mathematical and Physical Sciences (MPS), Engineering (ENG), Computer and Information Science and Engineering (CISE), and Biology (BIO) Directorates. The Committee is concerned that the Administration has lost sight of the NSF's core mission to support the physical sciences that lead to technological innovations and economic benefits. Several recent studies conducted using the NSF's SBE funding have been of very questionable value for an agency devoted to spur innovation and American competitiveness. Scientific endeavors in areas that have demonstrated return on investment for the American taxpayer deserve priority.

The Science Committee will recommend specific Research directorate funding levels within NSF's Research and Related Activities account in FY 2016. In FY 15, upon the Committee's recommendation, the entire $126 million increase in the NSF Research appropriation above the request was applied to the following four priority directorates: MPS (+$41 million); ENG (+$34 million); CISE (+$28 million); and BIO (+$23 million). These priority physical science research areas will continue.

The Committee also recommends that in prioritizing NSF Research, the remaining NSF accounts should be appropriately rebalanced and allocated.

National Institute of Standards and Technology (NIST)

As a non-regulatory science and technology agency that supports American commerce, NIST conducts high-quality research and develops technical standards that keep our industries globally competitive and benefit all Americans. NIST facilitates the transition and makes possible the adoption of new discoveries, technologies, and other innovations into the commercial marketplace. The Administration's FY 2016 NIST budget request includes a funding level of $1.12 billion, an increase of nearly $256 million, or 30 percent, from the FY 2015 enacted level for NIST.

In 2014, the House passed legislation to reauthorize NIST by voice vote. The legislation authorized nearly $856 million for the Institute in FY 2015. Within this authorization, the priority was the fundamental, enabling core research of the NIST laboratories in the Scientific and Technical Research and Services, and Facilities accounts at a total of $726 million. This is also the FY 15 funding level. The FY 16 request for these two priority NIST accounts is $814 million, a more reasonable 12 percent increase.

The third NIST account, Industrial Technology Services (ITS), was authorized at $130 million for FY 15 in last year's House-passed bill. FY 15 funding is $138 million. The President's FY 16 request for ITS is $306 million, over a doubling with a $168 million increase including $150 million for a National Network for Manufacturing Innovation (NNMI). The Committee recognizes the need to strengthen our nation's manufacturing sector and the need for ways to improve the transfer of federally-funded manufacturing research at universities and government laboratories to the private sector. However, the *Revitalize American Manufacturing and Innovation Act* (RAMI), approved by the Science Committee and eventually signed into law in December 2014, authorizes NIST to use not more than $5 million annually for 10 years from ITS to defray its costs of NNMI program administration. Instead, RAMI authorized the transfer of a total of $250 million over 10 years from DOE's Energy Efficiency and Renewable Energy account to pay for the bulk of NNMI's program costs.

For FY 2015, Congress also provided $130 million for ITS' Manufacturing Extension Partnership (MEP) and $8.1 million for its Advanced Manufacturing Technology program (AMTech). The House-passed NIST reauthorization bill included just the $130 million for MEP in FY 2015. The FY 2016 NIST ITS budget request includes $141 million for MEP and $15 million for AMTech.

Office of Science and Technology Policy (OSTP)

In the 113th Congress, citing Executive Privilege, OSTP refused the Science Committee's repeated requests for former U.S. Chief Technology Officer (CTO) Todd Park to testify on his role in co-chairing the White House Steering Committee to build the HealthCare.gov website. Ultimately, the Committee issued a subpoena to compel his appearance. At no time during Science Committee oversight hearings or briefings over the past several years did OSTP mention the CTO's role with the HealthCare.gov website, despite the fact that the U.S. CTO is part of OSTP. Since OSTP neither demonstrates a willingness to be held accountable for its actions, nor provide transparency to the American people, the Committee recommends a funding reduction of $1 million for OSTP, commensurate with the size of the Office of the Chief Technology Officer. Note that in H.R. 4186, approved by the Science Committee last year, OSTP was authorized at $4,555,000 for FY 2015. Unfortunately, OSTP received its full request of $5,555,000 in the Consolidated and Further Continuing Appropriations Act.

Department of Energy (DOE)

The Department of Energy (DOE) funds a wide range of research, development, demonstration and commercial application activities. The overall FY 2016 budget request for DOE is $29.9 billion, which represents a $2.5 billion, or 9.2 percent, increase over enacted FY 2015 levels ($27.4 billion). A little over a third of this amount is directed to civilian energy research, development, and demonstration programs in the Science Committee's jurisdiction. The budget request also continues the reorganization of the Energy Department into three Under Secretariats (Energy and Science, Nuclear Security, and Management and Performance) that was proposed in the FY 2015 budget, and includes six specific crosscutting initiatives funded within Science and Energy. The Committee recognizes the importance of energy development to America's economic future, but has serious concerns with the overall increase in spending and asymmetric prioritization within the President's budget request. Rather than late-stage demonstration and deployment efforts, DOE's top priority should be basic research and foundational science centered on domestic energy resources. Basic research serves as a long-term economic driver and provides the foundation for sustainable growth, rather than short-term, potentially expensive commercialization activities that result in the government picking winners and losers in the energy technology marketplace.

Office of Science

The DOE Office of Science (SC) is the federal government's primary supporter of long-term basic research in the physical sciences, as well as design, construction, and operation of major scientific user facilities. The FY 2016 budget request for SC is $5.34 billion, a 5.4 percent increase over the enacted FY 2015 level, but virtually the same level as authorized for FY 2015 in H.R. 4869, the DOE R&D Act of 2014 considered by the Science Subcommittee on Energy last year. The Science Committee recognizes the key leadership role the Office of Science performs in the nation's research capabilities. The Office of Science has an established record of making crucial scientific discoveries and serves as a long-term driver of innovation and economic growth. The Committee also acknowledges SC's record of excellence in managing world-class research facilities, which deliver revolutionary breakthroughs in numerous scientific disciplines. Accordingly, the Committee believes the Office of Science should be the highest priority for DOE R&D programs and should be the focus for any available increases, especially in Basic Energy Sciences and Advanced Scientific Computing Research. However, in light of budget circumstances, the Committee believes there are other opportunities within the DOE budget for reductions in spending to offset priority increases in the Office of Science budget.

Energy Efficiency and Renewable Energy

The Administration's budget request of $2.72 billion for the Office of Energy Efficiency and Renewable Energy (EERE) represents a 42.3 percent ($809 million) increase from the FY 2015 enacted level. The Committee strongly objects to yet another increase in EERE's budget, and, in fact, supports significant EERE reductions as passed by the House last year as part of the Energy and Water Appropriations bill, as well as those proposed in the DOE R&D Act of 2014. This concern is based on EERE's focus on commercialization over research, and incremental, relatively low-impact technological advances which pose the potential for overlap and duplication resulting from the DOE's multitude of programs and private sector efforts. Further, beyond specific programmatic and policy concerns, the ability of EERE to responsibly manage and effectively oversee a 58% increase since FY 2008 is not credible. The Committee recommends that the DOE budget reflect the proper role of the federal government by prioritizing basic research in the Office of Science, rather than the increasingly gratuitous approach of picking winners and losers.

Nuclear Energy

The Administration's request for the DOE Office of Nuclear Energy (NE) is $908 million, an 8.9 percent increase from the enacted FY 2015 appropriation. However, the Administration proposes to cut funding for actual nuclear R&D by 3.2% below FY 2015 enacted levels. The Science Committee objects to these proposed budget cuts for nuclear R&D, especially in light of the Administration's proposed use of R&D funds to develop alternatives to the Yucca Mountain repository, despite existing law designating Yucca Mountain as the destination for the nation's used nuclear fuel inventory. The Committee supports continuing analytical examination of issues associated with nuclear safety and the development of small modular and advanced reactor technologies in collaboration with the Nuclear Regulatory Commission.

Fossil R&D

The DOE Office of Fossil Energy (FE) supports research and development focused on coal, natural gas, and petroleum, and also supports the federal government's Strategic Petroleum Reserve. The President's FY 2016 budget request for Fossil Energy R&D is $560 million. This reflects a slight reduction from the FY 2015 enacted level of $562 million. The Science Committee remains concerned about the way the Administration's request continues to undermine fossil fuel research and technologies to meet regulatory requirements and challenges while providing significant increases for renewable energy commercialization.

The Committee continues to support a real "all-of-the-above" approach to energy policy centered on developing domestic energy resources to ensure access to abundant and affordable energy. However, the Administration's request continues to marginalize fossil energy R&D compared to the renewable energy investment, with specific reductions in Unconventional Fossil Energy Technologies and coal R&D. The Committee remains concerned about ongoing cooperation between DOE, the Environmental Protection Agency (EPA), and the Department of the Interior in the Natural Gas Technologies Program, as well as the proposed new mid-stream emissions mitigation and emissions quantification subprograms conducted in coordination with the EPA. DOE's budget provides minimal details on the direction of these new subprograms, which appear to be designed to provide a foundation for future federal regulation of hydraulic fracturing and other conventional and unconventional exploration, production, and mid-stream activities.

DOE Loan Programs

The FY 2016 Loan Programs Office budget request will allow the Innovative Technology Loan Guarantee Program to continue active monitoring of closed projects while increasing efforts to deploy $24 billion in loan authority and $169.6 million in section 1703 credit subsidies for innovative energy technologies.

The loan guarantee program offers businesses the ability to secure below market financing rates. Private financial institutions have a record of supporting economically feasible and valuable projects. Highly developed financial markets have the necessary tools to evaluate the relative worth of an energy project and provide the appropriate level of financing. Accordingly, the federal government should avoid interference in energy technology markets that results in picking winners and losers among competing companies and technologies. This concern is further exacerbated by political favoritism that drove decision-making associated with loan decisions made earlier in this Administration. In light of the loan guarantee program's troubling record, the Committee supports funding only those activities necessary to support the existing portfolio of loan programs, and recommends rescinding funds for new credit subsidies.

National Oceanic and Atmospheric Administration (NOAA)

NOAA's FY 2016 budget request is $6.0 billion, an increase of $534 million, or 9.8 percent, above the FY 2015 enacted level. Within that amount, $2.4 billion is for the National Environmental Satellite, Data and Information Service (NESDIS), a $156 million, or 7 percent, increase over FY 2015. The NESDIS budget primarily funds the Joint Polar Satellite System (JPSS) and the Geostationary Operational Environmental Satellites (GOES) acquisition programs. The Science Committee remains concerned that the NESDIS request continues to total 40 percent of NOAA's overall request, a dramatic departure from FY 2008 levels when NESDIS spent less than $1 billion, representing less than one-quarter of the overall NOAA budget.

The Committee's top priority for NOAA is rebalancing the agency's research portfolio to better predict severe weather to protect American lives and property. The Committee supports a strong research enterprise at NOAA; however, the Administration continues to direct NOAA research funding increases almost exclusively to climate rather than weather. The Administration's most recent budget request would only exacerbate the imbalance between these priorities, resulting in a climate research budget twice as big as for weather research ($188.8 million vs. $97.3 million, respectively). The FY 2016 request includes an increase of more than $29 million for climate research (a more than 18 percent jump from FY 2015 enacted levels). This portfolio is not in sync with the public safety needs of the American people and should be rebalanced.

The Science Committee supports fully implementing the tenets of last year's Weather Forecasting Improvement Act. That bill, reported by the Science Committee and passed by voice vote on the House floor, prioritizes weather R&D and technology transfer to operations in NOAA's Office of Oceanic and Atmospheric Research at $120 million. This will make possible accelerating development and deployment of transformative global and regional weather models, graphic processing supercomputing, institutionalized Observing System Simulation Experiments, and new aerial weather observing systems for better meteorological data. The bill authorizes $20 million of dedicated OAR funding for the direct transfer of new knowledge, technologies, and applications to the National Weather Service and other agencies and entities under a "real-time research" approach. Committee membership will be reintroducing the Weather Forecasting Improvement Act in the 114th Congress.

The Committee recognizes that NOAA's Earth System Prediction Capability (ESPC) includes both weather and climate prediction research. ESPC funds allocated to OAR's Weather Labs and Cooperative Institutes should be exclusively used for improvement of weather models associated with prediction of major storms, tropical storm tracks, tornado outbreaks and other phenomena of great importance to protecting the public from hazards. Climate funding should only be used for the ESPC model prediction efforts that go beyond the weather hazards time scale of forecasts out to two weeks.

The Science Committee supports full-funding for the GOES weather satellites, as they are too important to fail the American public. However, the Committee remains concerned with the cost, potential forthcoming gap in weather satellite data, and NOAA's mismanagement of JPSS (estimated lifecycle cost for JPSS is $11.3 billion through 2025). For years, this program and its predecessor have been plagued with cost over-runs, poor management, agency infighting, technical problems and contractor mistakes. A recent, independent review found NOAA's management still to be "dysfunctional" and elucidated on various management problems and recommended solutions. The Committee only supports funding for JPSS if the Administration provides much greater transparency with independent cost estimates for the program and requires much more proactive management within NOAA and the Department of Commerce. Further, to mitigate the impact of a gap in weather satellite coverage and as a condition of JPSS funding, Congress must require NOAA to immediately and objectively consider and implement alternative, less-costly sources of weather data and monitoring capabilities. Such consideration should include observing system simulation experiments to assess the value of data from Global Positioning System radio occultation and a geostationary hyperspectral sounder global constellation.

The Science Committee generally supports the overall National Weather Service budget request of $1.1 billion in FY 2016, a modest increase from FY 2015. The Committee is supportive of

efforts to implement recent management recommendations from the National Academy of Sciences and the National Academy of Public Administration.

Environmental Protection Agency (EPA)

EPA's FY 2016 Science and Technology (S&T) budget request is $769 million, a 5 percent increase from FY 2015 enacted, of which $528 million is for the EPA Office of Research and Development.

The Administration's ambitious regulatory agenda should be dependent on, and ultimately determined by, objective, transparent scientific and technical information. Unfortunately, Science Committee oversight efforts have identified numerous instances in which such information was distorted, withheld from peer review and scientific scrutiny, and selectively used to advance a pre-determined agenda. As a result of EPA's advocacy-driven scientific activities and the lack of transparency in major environmental research funded by the Agency, the Committee sees fundamental reforms and adherence to the Administration's Scientific Integrity Policy as a prerequisite to funding this research. Until such reforms are instituted, no funds should be provided for the Administration's rule-making overreach and the EPA budget should be significantly reduced as recommended by the House Appropriations Committee last year. Specifically, EPA S&T funding should be made strictly contingent on requiring the EPA Administrator to specifically identify and make publicly available all scientific and technical information relied on to support a risk, exposure, or hazard assessment, criteria document, standard, limitation, regulation, regulatory impact analysis, or guidance.

Numerous problems with the Agency's Integrated Risk Information System (IRIS) have been highlighted by the National Academy of Sciences, the Government Accountability Office, and in testimony before the Committee. In light of these continuing problems, the Science Committee recommends that resources be directed to ensure that all ongoing assessments adhere to more rigorous peer review, the requirements outlined in the conference report of the Consolidated Appropriations Act of 2012, and the recommendations in chapter seven of the National Academy of Sciences' Review of EPA's Draft IRIS Assessment of Formaldehyde.

Further, these overwhelming problems and serious integrity concerns of fraud and abuse justify a robust EPA Inspector General (IG) operation with an increased budget. The Committee is especially troubled by reports that EPA employees may have failed to save thousands of text messages, including those that would qualify as federal records, from government-issued electronic devices. Furthermore, the Committee continues to be troubled by reports that the EPA Office of Homeland Security refuses to cooperate with the EPA IG. Therefore, funding for this Office should be contingent on its submission to full IG oversight.

U.S. Global Change Research Program

The U.S. Global Change Research Program (USGCRP) FY 2016 budget request is $2.7 billion, an increase of $223 million, or 9 percent, above FY 2015 enacted levels. USGCRP is a crosscutting interagency Federal research and applications initiative focused on the science of climate change and in support of the President's Climate Action Plan. Despite the completion of the National Climate Assessment in May of 2014, the USGCRP FY 2016 budget includes significant increases in the contributions by virtually all ten participating agencies, including from the Science Committee's jurisdiction: NASA, up $119 million to $1.54 billion; NSF, up $10 million to $341 million, the Department of Commerce including NOAA and NIST, up $19 million to $331 million; the Department of Energy, up $27 million to $241 million; the Department of the Interior/USGS, up $25 million to $83 million; and even the EPA, up $6 million to $22 million.

The Committee remains seriously concerned that these interagency efforts have never fallen from 2009 stimulus levels; in fact, the FY 2016 request is nearly a billion dollars, or more than 50 percent, above FY 2008 levels. Similarly, additional funds are being requested for other program areas not contained in the USGCRP request, including $7.4 billion for Clean Energy Technologies, $4 billion for a new EPA Clean Power State Incentive Fund, and $500 million for the new Green Climate Fund. The Science Committee views these requests as poorly defined and fiscally irresponsible and will seriously consider opportunities to rationalize, consolidate, and reduce them.

Department of Homeland Security (DHS)

The FY 2016 budget request for the Department of Homeland Security Science and Technology Directorate (DHS S&T) is $779 million, a decrease of $441 million or 36 percent from the FY 2014 enacted level and the current funding rate in the FY 2015 DHS Continuing Resolution. This reduction results from DHS S&T's plan to award the laboratory construction contract for the National Bio and Agro-Defense Facility (NBAF) in FY 15. The awarding of this contract will complete construction costs for NBAF, which results in a $400 million decrease in the laboratory facilities budget line.

The FY 16 DHS budget request for the Domestic Nuclear Detection Office (DNDO) is $357 million, a $69 million, or 24 percent, increase from the FY 14 enacted level and current FY 15 rate.

The Science Committee recognizes the critical role that research and development plays in supporting DHS's mission and believes that the DHS S&T Directorate should be provided with the resources it needs to keep our nation safe and our borders secure. However, in a constrained fiscal environment, it is essential that DHS gets the most out of every dollar by delineating and prioritizing risks and vulnerabilities to be addressed, providing tangible results that further the Department's mission, and coordinating with other agencies to maximize efficiencies.

Department of Transportation

Office of the Assistant Secretary for Research and Technology

The Office of the DOT Assistant Secretary for Research and Technology is located within the Office of the Secretary of Transportation. The FY 2016 budget request for the Office of the Assistant Secretary for Research and Technology is $14.6 million, which is $1.6 million above the FY 2015 enacted level of $13 million.

Federal Aviation Administration

Office of Commercial Space Transportation

The Federal Aviation Administration's Office of Commercial Space Transportation (FAA-AST) plays a critical role in facilitating and monitoring the development of the commercial space industry and protecting the uninvolved public under the Commercial Space Launch Act. It is imperative that the Administration continue its efforts to provide an environment that fosters growth without burdensome regulations. This year, the FAA requested $18.1 million for FAA-AST in order to support increased license and permit determinations, certifications, and technical outreach. This represents an increase of $1.3 million relative to the recently passed FY 15 omnibus appropriations bill.

For several years, the FAA projected increases in commercial space activity that necessitated increases in funding to handle this activity; this year is no exception. The FAA expects there will be up to 30 commercial space launches in FY 2015, an increase of 11 over the 19 that occurred in FY 14. FAA's projected launch rate last year was overestimated by nearly 30 percent (33 anticipated launches, yet only 19 materialized). The Science Committee recognizes that funding is not directly tied to launch rates because safety inspections continue to rise. The Committee will continue to monitor the necessity of increased funding without commensurate increases in launch activity.

Research, Engineering, and Development

FAA's Research, Engineering, and Development (RED) work supports NextGen activities as well as other research areas such as safety, propulsion and fuel systems, unmanned aircraft, advanced materials, and aviation weather. The FY 2016 RED budget request of $166 million is a 5.7 percent increase over FY 15 enacted levels. The Science Committee supports a robust research and development portfolio at FAA, in coordination with NASA, to expeditiously investigate technological solutions for the challenges associated with the timely and safe integration of unmanned aircraft into the National Airspace System. Similarly, investments in aviation weather, safety, advanced materials, and propulsion and fuel systems offer promise for a safer and more efficient aerospace sector.

The Committee will continue to monitor how the FAA integrates research, development, and technological innovation into NextGen now that the Joint Planning Development Office activities have been consumed by the NextGen organization. The Science Committee remains concerned that funding for long-term investments in innovative technologies that pose great promise for increased efficiency and safety will be used for near-term operational needs.

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