

U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

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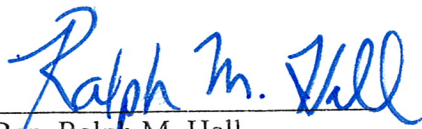
Rep. Jeb Hensarling, Co-Chair
Joint Select Committee on Deficit Reduction
129 Cannon House Office Building
Washington DC, 20515

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Joint Select Committee on Deficit Reduction
448 Russell Senate Office Building
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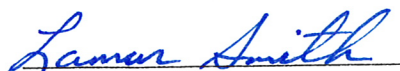
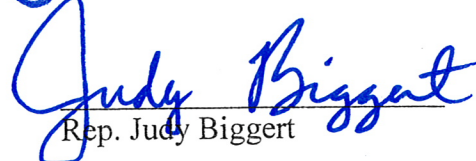
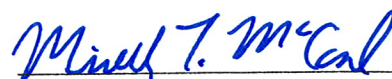
Dear Joint Select Committee on Deficit Reduction Chairs,

As Members of the Committee on Science, Space, and Technology in the U.S. House of Representatives, we wanted to provide our recommendations to you as you deliberate on the important topic of deficit reduction. Like you, we recognize the necessary task of controlling our nation's ballooning deficit and getting our citizens back to work. We also understand that the long term health of our country depends on our global competitiveness and the ability to continue to innovate. With that in mind, we are recommending over \$1.5 billion in savings in FY12 alone. We believe that the attached recommendations prioritize research and development programs that protect our national security and leadership, allow private investors and the marketplace to thrive without undue Federal influence, and have the most potential for sustained long-term growth.

Sincerely,

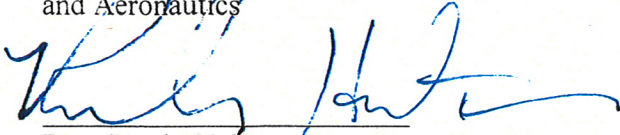


Rep. Ralph M. Hall
Chair


Rep. Lamar Smith
Rep. W. Todd Akin
Rep. F. James Sensenbrenner
Vice-Chair
Rep. Judy Biggert
Rep. Michael McCaul



Rep. Steven Palazzo
Chair, Subcommittee on Space
and Aeronautics



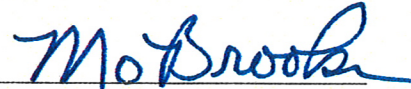
Rep. Randy Hultgren



Rep. Paul Broun
Chair, Subcommittee on Investigations
and Oversight



Rep. Andy Harris
Chair, Subcommittee on Energy
and Environment



Rep. Mo Brooks
Chair, Subcommittee on Research
and Science Education

Joint Select Committee on Deficit Reduction

Discretionary Spending Recommendations Offered by the Following Members of the Committee on Science, Space, and Technology: Rep. Ralph M. Hall, Rep. F. James Sensenbrenner, Rep. Lamar Smith, Rep. Judy Biggert, Rep. W. Todd Akin, Rep. Michael McCaul, Rep. Steven Palazzo, Rep. Andy Harris, and Rep. Randy Hultgren

Department of Energy

The Department of Energy (DOE) funds a wide range of research, development, demonstration and commercial application (RDD&CA) activities overseen by the Committee on Science, Space and Technology. These activities comprise roughly one-third of the Department's nearly \$25 billion budget.

In recent years, the balance of these research and development activities has shifted significantly toward near-term, market-focused efforts, particularly in the area of clean energy. While we support an "all of the above" energy policy that recognizes the potential value of clean energy technologies to America's long-term economic future, we object to the overall spending on, and relative prioritization of, these activities, particularly in light of concerns regarding the tendency of these activities to result in inappropriate government intervention in the energy technology marketplace. Accordingly, we would suggest that spending cuts in these areas may be appropriate. We would encourage the Joint Select Committee to look more closely at the following core DOE "clean tech" programs to achieve reductions in spending: Energy Efficiency and Renewable Energy (EERE), Advanced Research Projects Agency – Energy (ARPA-E), and the Loan Guarantee Program Office (LPO).

Energy Efficiency and Renewable Energy

Currently funded at a level of \$1.8 billion, the Office of Energy Efficiency and Renewable Energy (EERE) funds a wide array of energy efficiency and renewable energy technologies. For example, EERE has programs devoted to developing and commercializing vehicle technologies, buildings technologies, industrial technologies, as well as solar, wind, geothermal and biomass energy sources. In an era of fiscal belt tightening, we do not believe EERE's focus on near-term, incremental, low-impact technology warrants prioritization. Additionally, it has benefited significantly from recent budget increases, growing 57.8 percent since FY06, in addition to receiving \$16 billion from the American Recovery and Reinvestment Act.

We further believe many of the activities conducted by EERE are unnecessary and represent an inappropriate government involvement in the marketplace, resulting in the government "picking winners and losers" among competing companies and technologies. EERE's most recent budget increases include a number of programs explicitly designed to assist with technology-specific demonstration, deployment and commercialization activities. Fundamentally, the act of

providing individual firms with government money for the purpose of commercializing profitable technology is an inappropriate intervention in the market that may minimize or discourage greater private investment.

EERE also conducts a multitude of “outreach and education” programs encompassing projects from developing K-12 curriculums to energy efficiency marketing campaigns to providing energy resource assessments for governments scattered throughout Latin American and the Caribbean. These projects are of questionable merit and provide significant opportunities for savings to the taxpayers. Accordingly, we recommend EERE’s budget be reduced to \$1.2 billion, for a savings of \$600 million.

Advanced Research Projects Agency – Energy

The Advanced Research Projects Agency – Energy (ARPA-E) was created in 2007 with a charge to fund high-risk, high-reward research that “industry itself is not likely to undertake.” Initially provided with \$400 million in the 2009 Recovery Act, ARPA-E did not receive a direct appropriation in FY10, but received \$180 million in FY11.

We remain concerned with ARPA-E. In 2007, many Republican members opposed the creation of ARPA-E because they feared the program would emphasize late-stage technology development more appropriately performed by the private sector, and that it would be funded at the expense of priority basic research programs within the Office of Science.

These concerns appear validated by ARPA-E’s initial activities, which suggest several instances of awards being made for activities already being pursued by the private sector. While we remain open to identifying an acceptable manner in which to support truly high-risk and unsupported transformational research activities such as those described in the original ARPA-E vision, we are concerned that the program focus to date has inappropriately tended to position the government in a venture capital type of role. Accordingly, we do not believe the program should receive funding for new awards unless and until programmatic improvements are made to ensure awards fund truly high-risk research that industry is not likely to undertake.

Loan Guarantee Program Office

In 2009 the American Reinvestment and Recovery Act amended Title XVII of the Energy Policy Act of 2005 by adding Section 1705. Section 1705 permitted the Secretary of Energy to make guarantees for renewable energy systems and facilities that manufacture related components, electric power transmissions systems, and leading edge biofuels projects; all commencing construction not later than September 30, 2011. As implemented, the Section 1705 loan guarantee program offers businesses the ability to secure below market financing rates while not requiring the recipients to pay the associated credit subsidy. We are concerned with this practice and encourage the Joint Select Committee to repeal Section 1705 as enacted.

The Office of Science

Currently funded at \$4.8 billion, 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. We recognize the unique role of the Office of Science in supporting world-class scientific research and facilities and note its continued strong support for basic research activities as a key driver of innovation and long-term economic growth. We also recognize its strong record in managing construction and operation of major scientific facilities that are delivering cutting-edge research breakthroughs in areas such as materials science and chemistry. Accordingly, we believe the Office of Science should be the top funding priority among DOE R&D programs and be protected from cuts by the Joint Committee.

However, in light of budget circumstances, we intend to continue to work to identify areas within the Office of Science budget which warrant consideration for cuts. Of particular interest in this regard are Biological and Environmental Research activities, which fund significant research in areas ancillary to DOE's primary mission and/or potentially duplicative of research funded elsewhere in the government (such as climate change). Current spending for Biological and Environmental Research is \$611.8 million, and the House-passed FY12 Energy and Water Appropriations subcommittee bill funds the activities at \$547 million. We are concerned that the Atmospheric System Research and the Climate and Earth Systems Modeling programs are duplicative of research programs at the National Oceanic and Atmospheric Administration and the National Science Foundation. Therefore, we would recommend adhering to the FY12 levels for a savings of \$64 million. Additionally, the Fusion Energy Sciences program is an area of concern due to high-risk program management and international funding and cooperation challenges associated with the ITER project. Finally, the value of spending on science education and workforce development also warrants further review.

Nuclear Energy

Current funding for DOE Office of Nuclear Energy (NE) R&D programs is \$359 million. We strongly support advancement of nuclear energy and the associated research. This support does not preclude our concern for misdirected and lower priority R&D within this area. For example, the large scale and complex nature of nuclear reactor systems warrants a focus on technologies with a realistic potential for deployment, rather than on continuing research on well-studied technologies unlikely to move beyond the laboratory.

We are encouraged by DOE's support for the Nuclear Energy Enabling Technologies (NEET) program and the Light Water Reactor (LWR) Small Modular Reactor (SMR) Licensing Technical Support program. The NEET program may provide an avenue for reactor development with crosscutting technologies which are not easily categorized specifically as fuel cycle or reactor concepts technology.

SMRs are well-researched and near demonstration. SMRs hold promise; however, they require approval and licensing from the Nuclear Regulatory Commission (NRC). The proposed LWR SMR program intends to overcome associated regulatory challenges. DOE must work closely with NRC to advance the SMR licensing process, at which point the LWR SMR Licensing Technical Support program should be terminated.

Electricity Delivery and Energy Reliability

The DOE Office of Electricity Delivery and Energy Reliability (OE) oversees the modernization of the electric grid, the reliability of energy infrastructure and conducts research and development for energy delivery-related technologies. This office is currently funded at \$141 million. We support targeted R&D in areas such as cyber security for energy delivery, which provides basic value and is a wise and necessary investment for the federal government. However, we do believe opportunities for spending cuts exist. For example, in the area of energy storage R&D we are concerned about potential overlap with similar programs in the Office of Science, EERE, and ARPA-E. This office also funds extensive Smart Grid activities that may not be necessary and do not warrant funding priority. Therefore, we concur with the House-passed FY12 Energy and Water Appropriations subcommittee level of \$139.4 million, for a savings of \$1.5 million.

Fossil Energy

The DOE Office of Fossil Energy (FE) supports research and development focused on coal (including “clean coal” technologies), gas, petroleum, and also supports the Federal Government’s Strategic Petroleum Reserve. The current discretionary funding level for R&D supported by this office is \$444 million.

The vast majority of this funding is directed toward advancing carbon capture and sequestration (CCS) efforts. This nearly exclusive emphasis on a technology that will not be deployed in the absence of cap and trade or similar mandatory carbon constraints--a prospect that was rejected by Congress—is unwise. We believe the United States must develop domestic energy resources to improve America’s energy security. Accordingly, we recommend restoring DOE’s Fossil Energy program to its prior focus on fundamental R&D to advance oil and gas exploration and production technologies and enable near-term environmental improvements, such as increasing power plant efficiency and research on non-greenhouse gas related pollution abatement technology.

We continue to be supportive of an “all-of-the-above” approach to addressing energy supply and demand issues, and recognizes the potential of renewable energy and energy efficiency technologies to contribute to this effort. For example, we strongly support the Ultra-Deepwater and Unconventional Natural Gas and Other Petroleum Research Program. The \$50 million program is funded by Federal lease royalties, rents, and bonuses paid by oil and gas companies—not taxpayers. The program was established 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. Further, the program is the only R&D program in the Federal government capable of addressing drilling safety and accident prevention-related technology needs in a timely and effective manner.

National Aeronautics and Space Administration

NASA is the nation's civil space and aeronautics research and development agency, carrying out a diverse set of missions and projects designed to expand our understanding of Earth, the Solar System, and the universe. NASA operates the International Space Station (ISS) and a number of satellites in orbit around Earth and throughout the solar system. It also undertakes activities in technology development and transfer, education, outreach, and participates in a number of interagency initiatives such as nanotechnology, information technology, climate change research, and the Next Generation Air Transportation (NextGen) program.

NASA was last authorized by Congress during the fall of 2010 (PL 111-267); the authorization for FY12 is \$19.450 billion. Under the CR for FY11, NASA received \$18.448 billion. The FY12 House CJS Subcommittee mark provides \$16.810 billion.

Human Space Flight Program

As of this summer, with the retirement of the Space Shuttle program, NASA no longer has a domestic launch system able to take our astronauts to and from low Earth orbit, which would include trips to the ISS.

Since 2005, two different Congresses passed legislation – signed by the President – that endorsed a new launch system development program as a successor to the Space Shuttle that would enable human exploration beyond low Earth orbit. The resulting *Constellation* program was to be comprised of a launcher and crew capsule for low-Earth orbit missions, and a larger heavy-lift launcher for deep space destinations such as the Moon. Last year the Obama Administration cancelled *Constellation*, claiming it was unsustainable. In its place, NASA proposed a public-private partnership for the federal government to seed development of several commercial crew launch companies with the goal that the agency could then buy seats on their rockets to take astronauts to ISS. These same companies are expected to market their launch systems to other interested customers (e.g., space tourists, foreign astronauts funded by their home governments) with the goal that per-launch costs would be significantly reduced since NASA would not have to bear the full cost of owning and operating its own system. While we are supportive of innovative, commercial options, we have concerns that this proposal may not be viable or less-expensive than a traditional development program. NASA still has many issues to work through before proceeding forward, and we would urge caution with expenditures until more questions are answered and technologies demonstrated.

We concur with the funding levels called out in the FY12 House CJS Subcommittee mark for commercial crew development, \$312 million (same as the authorized level). We also strongly support proposed funding levels for the Space Launch System and Multi-Purpose Crew Vehicle. Overall savings within the Exploration program account included as part of the CJS Subcommittee mark is \$300 million in FY12, compared to the FY11 levels.

Science Mission Directorate

The Science Mission Directorate (SMD) plans, develops and manages NASA's space and Earth exploration missions. These include deep space probes, space observatories, and Earth orbiting satellites. SMD is comprised of four disciplines: Planetary Sciences; Earth Science; Astrophysics; and Heliophysics. SMD generally receives about one-quarter of NASA's budget allocation.

We propose reductions of \$177 million (based on the FY12 request) by taking the following actions:

- Cancellation of OCO-2 mission (received \$89.0 million in the FY11 CR; \$91 million savings in FY12; \$149 million savings over five years). Life cycle cost savings could be higher as NASA struggles to define a launch vehicle to carry OCO-2 to orbit.
- Reduce by 20% "Other Missions and Data Analysis" account within the Earth Systematic Missions (received \$274 million in the FY11 CR; \$74 million in savings in FY12; \$584 million in savings over five years). The FY12 request represents a 66.8% increase over FY2010 enacted, with an average annual increase thereafter of 32%.
- Reduce by 20% "Venture Class Missions" account within the Earth System Science Pathfinder Missions (received \$32 million under the FY11 CR; \$12.4 million savings in FY12; \$144 million savings over five years). Venture Class Missions is a new activity for NASA, begun in response to a recommendation from the National Academy of Sciences. It is, in essence, a new start. While we support the program's goals, we simply propose that growth in the spending profile be moderated.

Finally, we note that the FY12 budget includes a new program first proposed last year: Space Technology. The FY12 request seeks \$1.024 billion to manage and develop a portfolio of technologies needed to ensure the success of future missions, as well as enabling the spinoff of NASA technologies to the private sector. We support this endeavor generally, but believe these tough budgetary times argue for a smaller initial start and support the House CJS subcommittee mark of \$375 million.

National Science Foundation

The National Science Foundation (NSF) provides approximately 20 percent of Federal support for all basic research at U.S. colleges and universities and is second only to National Institutes of Health (NIH) 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 of education. It supports the fundamental investigations that ultimately serve as the foundation for progress in nationally significant areas such as national security, technology-driven economic growth, energy independence, health care, nanotechnology, and networking and information technology.

The current spending level for NSF is \$6.86 billion. For FY12, the House Appropriations Committee provided a slight increase of \$43 million over the FY11 amount for basic research. We would discourage funding for the Foundation to fall below the \$6.86 billion provided by the House Appropriations Committee.

Research and Related Activities (RRA)

The Research and Related Activities (RRA) account is currently funded at \$5.56 billion. House Appropriators have funded this account at \$5.6 billion for FY12, reflecting the \$43 million increase over FY11. There are a number of new programs that have been proposed as part of the increased research funding request for FY12 in the Administration's request, including \$35 million for a nanotechnology manufacturing initiative, \$40 million in next-generation robotics technologies, and \$96 million for an interdisciplinary program to eventually replace computer chip technologies. In addition, \$87 million is requested for advanced manufacturing activities including expanded university-industry research partnerships and regional innovation ecosystems and clean energy manufacturing research. Another \$117 million is requested for "cyber-infrastructure" activities to accelerate the pace of discovery and \$12 million for a "new program that will fund a suite of activities that promote greater interdisciplinary research." Much of the funding increases are focused on manufacturing technologies and regional innovation centers. We remain concerned that the increased emphasis in these areas moves the Foundation from its core mission of supporting basic R&D to significantly more support for applied areas of R&D, which are best left to market forces or agencies with specific applied R&D goals to advance their mission.

Further, as part of the Science, Engineering and Education for Sustainability (SEES) program that crosses all NSF directorates and has a goal of advancing "climate and energy science, engineering, and education to inform the societal actions needed for environment and economic sustainability and sustainable human well-being," the FY12 budget request is \$998.1 million, an increase of \$337.5 million or 51 percent over current spending. We recognize the broad interdisciplinary activities within the SEES program, but are greatly concerned that ten percent of the entire Foundation's current spending is being devoted to this issue, particularly given the strong emphasis on these programs across all relevant federal agencies. Further, we are strongly opposed to the 144.5 percent (\$63 million) budget request increase over the current spending of \$25.7 million for the NSF contribution to the Climate Change Technology Program (CCTP) and the 33 percent (\$106 million) budget request increase over the current spending of \$319 million for the NSF contribution to the U.S. Global Change Research Program. We support further reductions to current spending for both of these programs. Further, we recommend elimination

of the \$10 million Climate Change Education program, as worthy climate change education proposals are certainly eligible for other education funding at the Foundation.

Education and Human Resources (EHR)

Current spending for Education and Human Resources (EHR) is \$861 million. The House Appropriations Committee reported bill provides \$835 million. We feel this amount is sufficient given the current economic environment, but do remain committed to a strong NSF presence in STEM education, including K-12 STEM education. While the Administration is calling for an investment of \$3.4 billion in STEM education activities across the entire federal government, a number of proven NSF initiatives are being eliminated, reduced, or reprogrammed to make way for new or expanded programs. Like last year's request, the FY12 budget request continues to shift a greater responsibility for STEM education to the Department of Education while maintaining NSF primarily as a research agency. We agree that NSF is primarily a research agency, but also strongly believe that an essential element of NSF's mission is support for STEM education, from pre-K through graduate school and beyond. Therefore, we are concerned with this shift. We recognize that the Department of Education is better equipped to disseminate and replicate STEM programming, but the STEM-related research and expertise that NSF can and does provide is world-class and needs to be included in any appropriate larger, overarching STEM education activities carried out by the Federal government.

Additionally, the FY12 budget request includes \$40 million in funding for a new teacher-training research and development program, split evenly between K-12 teachers and undergraduate teachers. At the same time, the budget request for Noyce Scholarships is \$45 million, a decrease of \$10 million or 18.2 percent and the Math and Science Partnership is \$48.2 million, also a decrease of \$10 million or 17.2 percent under current spending. We understand and support the need to make cuts, but believe that Noyce Scholarships and MSP are proven and worthy programs and are not appropriate areas to be cut in order to fund new and unproven programs. Current spending for these programs should be sustained. It is also important to note that MSP at NSF is not the same program as MSP at the Department of Education and should not be confused as being duplicative; rather they are complementary.

National Oceanic and Atmospheric Administration (NOAA)

Operating with a current budget of \$4.588 billion in FY2011, the National Oceanic and Atmospheric Administration's (NOAA) mission of science, service, and stewardship is manifested through improvement of the understanding of oceans and atmosphere and how the interaction between the two affects human life, property and ecosystem health. NOAA provides critical weather and climate data necessary to protect lives and to enhance commerce through the National Weather Service (NWS) and the National Environmental Satellite Service (NESS). NOAA is responsible for mapping and charting coastal areas and other navigation support services through the National Ocean Service (NOS). NOAA also manages fisheries and conducts research on marine ecosystems and marine mammals through the National Marine

Fisheries Service (NMFS). Finally, NOAA conducts world-leading atmospheric and oceanic research through its Office of Oceanic and Atmospheric Research (OAR).

Our primary policy priorities for NOAA are to ensure the effective provision and management of its operational and research activities most closely related to protecting life and property. Foremost among these is ensuring the National Weather Service (NWS) is equipped with the funding and tools it needs to deliver critical weather information to the public. The most expensive component of this effort is developing, deploying and operating NOAA satellites, particularly the Joint Polar Satellite System (JPSS).

JPSS will provide polar-orbiting satellites scheduled to launch starting in 2016, which will replace currently operational satellites and provide key data used in weather forecasting and environmental observations. We strongly support funding to ensure continued operational weather forecasts, even if it must come at the expense of other programs at NOAA. Unfortunately, JPSS is well behind schedule and further budgetary shortfalls may result in a satellite data continuity gap, degrading the efficacy of timely weather forecasts and creating inconsistencies in the climate record. We have great concerns regarding the potential for major budget over-runs in this program, and without a proper baseline and aggressive cost controls, we are skeptical about this program's ability to deliver within the timeline NOAA has claimed. Therefore, we support a small redirection of funding from JPSS for NOAA, particularly the NWS, to explore more cost-effective options for obtaining the data necessary for timely and accurate weather forecasts.

With respect to research and service activities, we believe opportunities for some cuts exist, particularly with respect to climate-focused efforts unrelated to weather forecasting and emergency preparedness functions. However, we emphasize that the core NOAA science enterprise should remain strong, and in many cases can in fact lead directly to significant operational cost savings for the agency. For example, the Unmanned Aircraft Systems (UAS) program is poised to develop technology likely capable of delivering improved weather and environmental data for reduced cost, alleviating operational budgets for the National Weather Service and other NOAA activities. Similarly, relatively small investments on Multi-function Phased Array Radar (MPAR) has the potential to reduce the U.S. system by 180 radars, thereby reducing \$1.9 billion in acquisition savings and \$3 billion in operational cost reductions over 30 years. These investments have great potential to result in future cost savings and thus should be a top budget priority.

We do not support any funding for NOAA's proposed Climate Service. Despite the claim that this is a budget neutral proposal that would include assets consolidated from other line offices, we have serious concerns regarding the objectivity and utility of a new line office that will place greater strain on existing resources. Furthermore, we are concerned about the tendency that this line office would be used for advocacy as opposed to providing real services. The Committee on Science, Space, and Technology launched an investigation into NOAA's Climate Service on

September 21, 2011, and will not support the creation of a climate service until that investigation is complete.

Environmental Protection Agency (EPA)

The Science and Technology (S&T) account in the Environmental Protection Agency (EPA) covers research and development activities in several line offices. The activities by the Office of Research and Development (ORD) represent approximately 70 percent of the S&T budget. The FY11 funding for S&T is \$841.9 million.

Due to EPA's disturbing pattern of regulating based on insufficient or faulty scientific evidence, we feel that it is unnecessary to continue to fund EPA's research at existing levels until reforms are undertaken. For example, the Air, Climate and Energy (ACE) research programs at ORD includes activities to develop tools to assess behavioral responses to mitigation or adaption policies. This type of research does not further EPA's mission of protecting human health and the environment. Instead, these activities appear to be driven by policy advocacy, which is not an appropriate use of research dollars. Therefore, we recommend reducing the \$20.8 million from ORD that funds EPA's global change research.

We continue to have serious concerns about the the Integrated Risk Information System (IRIS), a risk-based database used by industry and government regulators alike. IRIS has been notoriously late on assessments, and with the decreased transparency that is now embedded into the new assessment process, we have grave concerns about the quality of the assessments produced. Furthermore, we do not support the use of poor quality data, reports or information in these IRIS assessments. It has come to our attention that such data is used to make determinations that will have substantial economic and policy implications. The National Academy of Sciences (NAS) has routinely reviewed IRIS assessments over the years, culminating in their *Review of EPA's Draft IRIS Assessment of Formaldehyde*. Chapter 7 of this report detailed specific protocols that are necessary to ensure IRIS assessments are based on the best available science. Until EPA demonstrates proper implementation of the recommendations from Chapter 7 of this report, we support cutting funding from the IRIS program.

National Institute of Standards and Technology (NIST)

The National Institute of Standards and Technology (NIST) is a non-regulatory laboratory of the federal government tasked with innovation and industrial competitiveness by advancing measurement science, standards and technology in ways that enhance economic security and improve our quality of life.

NIST is currently funded at \$750 million. The House Appropriations Committee recommended a FY12 funding level of \$701 million for NIST, which is 6.6 percent less than the FY11 enacted funding for NIST. The House Appropriations FY12 funding bill would provide \$517.0 million for NIST's Scientific and Technical Research and Services (STRS), which is 3.9 percent more than the FY11 enacted level; \$55.4 million for Construction of Research Facilities (CRF), which is 20.7 percent less than the FY11 enacted level; and \$128.4 million for the Manufacturing Extension Partnership (MEP) program, which is the same as the FY11 enacted level.

The House Appropriations Committee did not any provide funding for the Technology Innovation Program (TIP), the Baldrige National Quality Program, the Advanced Manufacturing Technology Consortia (AMTech), or the extramural construction grant program.

Laboratories and Construction

We recognize that NIST's laboratories support our nation's innovative capacity by working closely with industry to develop consensus-based voluntary standards and by conducting basic measurement science research. We feel that maintaining strong support for STRS at NIST is vital to our economic security. Therefore, we agree it is prudent to support a moderate increase as recommended by House appropriators, or in the very least sustained STRS funding at FY11 levels, and encourage Members of the Select Committee to preserve funding for NIST's core standards development and basic research functions.

Further, we are also aware that NIST is in the final stages of research facility renovation activities at the Boulder, Colorado, facility, and that it will need \$25 million in FY12. We believe that state-of-the-art facilities are essential to maintain the quality of NIST's intramural laboratories. After the completion of the ongoing project, we recommend adequate funding for Safety, Capacity, Maintenance, and Major Repairs of existing facilities over any proposed major new construction projects.

We support both the Appropriations Committee and the Administration in requesting no funds for the extramural construction grant program in FY12. These grants – previously awarded to external entities - do not directly support NIST's mission and were not an authorized activity. We believe NIST should remain focused on its primary mission and maintain its primary intramural research endeavors.

Industrial Technology Services

We view the proposed expansion of the Industrial Technology Services (ITS) programs as requested by the Administration for FY12 to be inappropriate in the current budget environment. Therefore, we believe that NIST funding cuts should be concentrated on external ITS programs and new construction before SRTS and lab maintenance. Among ITS programs, we would prioritize continued funding for the MEP program, which funds states to support advanced

domestic manufacturing, over the TIP program, the Baldrige National Quality Program, or the AMTech program. We support this prioritization, recognizing that the TIP program is unable to achieve its goals with existing funding restraints, the Baldrige program may be sustained by the private sector, and the AMTech program is a new \$12 million initiative that should not be started at the cost of other existing programs.

Public Safety Innovation Fund (WIN)

The FY12 budget request includes a plan to invest broadband spectrum receipts in a variety of areas, including \$100 million annually provided to NIST for 2012-2016 for research supporting the development and promotion of wireless technologies to advance public safety, Smart Grid, and other broadband capabilities. This funding is dependent on other activities to authorize incentive auctions that would reallocate Federal agency and commercial spectrum bands over the next ten years. Because NIST has a rich history of working closely with industry on interoperability standards, we believe that some portion of potential auction proceeds should be used to fund innovative research at NIST on wireless activities.

Department of Homeland Security (DHS)

The Department of Homeland Security Science and Technology Directorate (DHS S&T) funds research, development, testing and evaluation to improve homeland security. DHS S&T performs research and development (R&D) in several laboratories of its own, and also supports R&D performed by the Department of Energy national laboratories, industry, universities, and others.

While the overall Department's budget would be reduced by 3 percent from FY11 in the House FY12 funding bill, the S&T Directorate was reduced by 35 percent to \$539 million. For core research directly conducted by the S&T Directorate, the House bill provided \$107 million, or approximately 80 percent less than FY11 funding levels for these efforts (~\$500 million).

We do not believe that the S&T research function of DHS should be reduced at a rate much higher than the overall Department. Further cuts to DHS S&T overlook the necessity of a sustainable investment in longer-term R&D in order to support DHS's overall mission to respond to immediate needs. Specifically, we recommend no further reductions to the DHS S&T Research, Development, and Innovation budget category and feel that DHS S&T should receive funding at approximately FY08 levels (approximately \$800 million) in order to ensure that DHS has the resources it needs to maintain the critical R&D necessary to keep our nation, critical cyber infrastructure, and borders safe and secure.

Finally, we recognize the value of both the Assistance to Firefighter Grants (AFG) and Staffing for Adequate Fire and Emergency Response (SAFER) grants to our Nation's fire departments. President Obama's *American Jobs Act* proposes a First Responder Stabilization Fund, which includes \$1 billion for the SAFER hiring grants to hire or retain fire fighters and allows DHS to waive most of the requirements for use of these funds. The FY12-passed House appropriations bill provided \$335 million to both the SAFER and AFG programs, and SAFER has never received more than \$420 million in appropriations.

We remain concerned that the SAFER grant program continues to expand yet does not represent a long-term, sustainable investment in fire safety. The AFG program has helped first responders obtain critically needed equipment, protective gear, emergency vehicles, and the research and training necessary to protect the public from fire and related hazards. We feel that the SAFER program should be reduced while the more valuable, longer term AFG program should receive funding at the levels provided in the FY12-passed House appropriations bill.

Department of Transportation (DOT)

Research and Innovative Technology Administration (RITA)

We are concerned about long-term, rigorous transportation research and development remaining a high priority at DOT, and believes that we must provide realistic and sustainable funding for these programs in the future. Furthermore, we are concerned that the Administration's goals for some transportation research programs, such as Livable Communities or green construction, may stray from the fundamental transportation needs of most taxpayers including road safety and congestion mitigation.